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THE

MONEY-MAKER'S

MANUAL;

AND

SECRETS OF SUCCESS.

Containing Many Invaluable Recipes for the Better Enjoyment of

HEALTH, WEALTH AND PROSPERITY.

Embracing a Full and Complete Essay on the Right Treatment of that Noble Animal the Horse—How to Train and Educate, as well as How to Keep Him in the Best Condition.—Also, How to Prevent and Cure the Numerous Diseases to which He is Liable; Together with Much Other

VALUABLE INFORMATION,

TO BE UNIVERSALLY READ WITH PLEASURE AND PROFIT.

BY J. W. STEPHENS.

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PREFACE.

The title page of this work will sufficiently explain the nature of its contents, extended remarks at this point are therefore unnecessary. I am well aware that many persons have formed the erroneous idea that a small book cannot be worth as much as a large one. They seem to have overlooked the simple, but very important fact, that genuine value consists in merit, and not in bulk. In these pages briefness has been kept strictly in view, in order to give as much information as possible in a small compass, and at the same time retain all the advantages of a good plain type, and avoiding the necessity of extending the work to a large volume.

Various subjects have been introduced to make the book more valuable and interesting to all classes, trades and professions; but probably no particular class will be so much benefitted, as farmers or owners of horses. The system of horse training, as taught in this work, will supersede all others, in as much as it is the best and only true system. Never before, has there been such a vast amount of valuable information in reference to this noble animal, concentrated and published in any one volume.

Everything of a light or objectionable character has been avoided, with the view to render the book interesting, instructive, and every way worthy the approbation and patronage of the community at large.

THE AUTHOR.

[To Purchasers.—Persons buying this work have every right to use, but no right to teach or transfer to others, the book or its contents By so doing they will lay themselves liable to prosecution.]

THE MONEY-MAKER'S MANUAL.

New York, its Advantages and Disadvantages.

About two hundred and fifty-seven years ago, (September 12th, 1609,) Manhattan Island, on which the city of New York is built, was discovered by Hendric Hudson. It is 13½ miles long, with an average width of 1¾ miles, containing 22 square miles, or 14,000 acres. In 1623, the first white child was born here; her name was Sarah Rapelje. As late as 1626, seventeen years after its discovery, the Island was bought for $24.00 by Peter Minuets, the first Dutch Governor.

New York can now justly boast of being the great Metropolis of the United States. It is the grand centre of the various established lines of railroads, about one hundred of which converge here, making it the great starting point for various parts of the world. In almost every direction our eyes discover heavily laden trains, either bringing in the golden harvests of the great West, and the rich products of the far South, or wafting away the valuable manufactures and useful products of the East. The canvass of innumerable sailing crafts cause the surrounding rivers to wear a whitened surface, while far out on the great ocean thousands of vessels of all nationalities, may be seen coming and going, bearing within them the wealth and treasure from all parts of the Globe, to and from the great nucleus of commercial enterprise and prosperity.

Almost every kind of business is represented in New York, and there are but few trades unsuccessfully conducted. I do not wish however to convey the idea that there are great

openings here for new adventurers in business, and since this book will be read principally in the country, I would take this early opportunity to advise no one to come to New York to look for business, or seek their fortune, unless they bring with them sufficient means to sustain them until success shall crown their efforts; and even then they should possess a strong mind and a firm resolution to be virtuous, honest and temperate; with these qualifications, industry and perseverance, a person may succeed, in fact will be certain to succeed, as in almost any other place; but without them, here, the chances are, that they will be very likely to yield to some of the various temptations to vice, which infest this great but wicked city, in which case they will gradually go from bad to worse, until finally, in poverty and disgrace. they will be found subsisting on charity.

New York now has a population of about 1,200,000.

We have 248 publications, of which 18 are daily, 120 weekly, 90 monthly and 20 quarterly; consuming over 1,000,000 sheets or about 100,000 pounds of paper a day.

There are 268 miles of paved streets, averaging 33 feet wide, or 1139 acres.

There are 422 miles of gas mains, and 16,591 public lamps.

The Croton aqueduct has 1,555,654 feet, or nearly 295 miles of pipe of all sizes.

The Central Park extends in length from 59th to 110th streets, in width from 5th to 8th Av., covering 850 acres. It is with the exception of the French Park, *Bois de Boulogne*, the largest and most splendid park in the world. The Croton reservoir, within its limits, occupies 106 acres and is 38 feet deep.

Commissioners appointed by the Legislature in 1859, revalued the real and personal estate of the city at $856,964,491, the city's appraisement for the same year being $551,923,122. For 1864, the commissioners of taxes and assessments valued it at $410,774,435 for the real, and $223,920,505 for the personal estate, or $634,694,940, being a net increase of $49,540,597 over the year 1863, the tax then being about 2 per cent. For 1865 the total is $608,784,355, being a decrease of $46,410,592 in the personal estate, and $20,579,057 increase in the real, net decrease $25,831,535. The estimated value of real estate owned by the city is $42,917,226, the Croton aqueduct entering for $15,470,000, and the public parks for $14,761,526. The work on the former cost $15,210,630.

There are 71 Banks in New York city, 23 of which are Savings Banks.

In Fifth Avenue, and the many other fashionable localities, people are residing in princely mansions in the enjoyment of all the luxuries that heart can wish, or wealth procure; while if we take a walk over to Cherry Street, we can there find no less than 145 families, composed of 440 adults, and 460 children, making a total of 900 human beings, living in two tenement houses, 18 by 180 feet, five stories high each, on an area of 36 by 180.

We have some 400 places of worship, with an attendance of 250,000 people, who pay annually $550,000 to their Clergy. The church property is estimated at $20,000,000 and there are seats for about one third of the population.

The 3000 manufacturing establishments of the city employ 87,500 hands, and convert $70,000,000 of raw material into a value of $135,000,000 annually. They have $26,000,000 invested in real estate, and $12,500,000 in machinery.

There are 25 regular ferry routes, with upwards of 70 Steamboats, making some 2000 trips daily, transporting at times as many as 200,000 passengers, and 8,500 vehicles daily to and from the city.

New York in its Immoral Aspect.

All men, more or less, in large cities, overlook or forget they have had, or have mothers, sisters and wives, and somehow or other think every modest woman whom circumstances may throw in their way, a fair mark for their unscrupulous love-making. Hence the many thousands of unhappy, and once beautiful females who live on promiscuous intercourse with lascivious men. These unfortunate women may be seen at all hours of the day in public thoroughfares, bedizened with "fuss and feathers," and especially so in the evenings, and at the theatres. Against associating with these unhappy, but yet gay beauties, we would warn the inexperienced reader of these pages. No amatory commerce can be had with such, except with the risk of sacrificing all for which life can be alone desirable—health, character and self-respect.

In the whole of the United States there are not less than one hundred thousand loose or women of easy virtue: four tenths of these are probably in New York city, nightly dealing out physical death to a still greater number of inconsiderate men. They may not be all diseased, but it is safe to presume that one-third of the whole number are, and a little

exercise in simple division would show that the seeds of illicit poison are communicated daily to over 30,000 persons, many of whom have wives or bed-companions, to whom they impart the disease with all its horrors, sufferings and death. By such severe folly of mankind, offspring become infected; and with their ulcerated gums communicate it to the nipples of nurses, who have been called to supply the places of mothers in nurseries, and in turn imparting the disease to other innocent babes. Infection thus, like fire on the prairie, spreads throughout; and in time must destroy the whole human family.

Our country friends—readers of these pages—will take our warning in good part, and profit by it.

Invaluable Recipes.

Purgative Pills.—Simple extract of colocynth, 24 grains, extract of jalap, 12 grains; blue pill, 12 grains; ipecacuanha; 4 grains; oil of peppermint, 3 drops. Make into 12 pills. Dose, 2 to 4.

Digestive Pills.—Rhubarb, 2 ounces; ipecacuanha, ½ ounce; cayenne pepper, ¼ ounce; soap, ½ ounce; ginger, ¼ ounce; gamboge, ½ ounce. Mix, and divide into 4-grain pills.

Itch Ointment.—Olive oil, 1 lb.; suet, 1 lb.; alkanet root, 2 ounces. Melt, and when sufficiently colored, strain and add 3 ounces each of alum, nitre, and sulphate of zinc, in fine powder.

Anti-Bilious Pills.—Compound extract of colocynth, 60 grains; rhubarb, 30 grains; soap, 10 grains. Make into 24 pills. Dose, 2 to 4.

Recipe for Fits, Fever, Ague, &c.—Take 1 gal. good, pure whiskey, and 1 lb. vervine. Boil well or distill. 1 tablespoonful is a dose for a grown person.

To Whiten the Hands.—Take two cakes of brown Windsor soap, scrape to a powder, and add Eau de Cologne, two ounces; lemon juice, two ounces; mix well and form into cakes. This is an excellent soap to make the hands soft and white.

Scott's Wash to Whiten the Nails.—Tincture of myrrh, one drachm; diluted sulphuric acid, two drachms; spring water, four ounces. Mix. Cleanse the nails with white soap, then dip into the wash.

Cough Lozenges.—Powdered lactucarium, 2 drachms; extract of licorice root, 12 drachms; powdered squills, 15 grains; refined sugar, 6 ounces; mucilage of tragacanth sufficient to mix. Make into 240 equal lozenges.

Remedy for the Bite of a Mad Dog.—Take immediately warm vinegar or tepid water, wash the wound clean therewith, and then dry it; pour then upon the wound a few drops of muriatic acid, because mineral acids destroy the poison of the saliva, by which means the evil effect of the latter is neutralized.

To Prevent Hydrophobia.—Elecampane, 1 drachm; chalk, 4 drachms; Armenian bole, 3 drachms; alum, 10 grains; oil of anise-seed, 5 drops.

To Clear a Room of Mosquitoes.—Take of gum camphor a piece about one-third the size of an egg, and evaporate it by placing it in a tin vessel and holding it over a lamp or candle, taking care that it does not ignite. The smoke will soon fill the room and expel the mosquitoes.

To Make Hens Lay.—If a tea-spoonful of cayenne pepper is given to a dozen hens with their food every other day, winter and summer, the quantity of eggs they will produce will be nearly doubled. So says Dr. Hall.

Hooper's Female Pills.—Sulphate of iron, 8 ounces; water, 8 ounces: dissolve, and add Barbadoes aloes, 40 ounces; myrrh, 2 ounces; make 20 pills. Dose, 2 to 6.

Cough Compound.—For the cure of coughs, colds, asthma, whooping cough, and all diseases of the lungs: One spoonful of common tar, 3 spoonfuls of honey, the yolk of 3 hen's eggs, and ½ pint of wine; beat the tar, eggs, and honey well together with a knife, and bottle for use. A teaspoonful every morning, noon, and night, before eating.

To Remove Pimples.—Take white wine vinegar, four ounces; sulphur water, two ounces; acetated liquor of ammonia, one-half ounce; liquor of potassa, two grains; distilled water, four ounces. Mix, and apply twice a day.

Opodeldoc.—Take 2 ounces of Venetian soap; 1 ounce gum camphor; 1 pint of brandy; dissolve the soap in the brandy by a slow heat, then add the camphor.

To Prevent Scorching in an Oven.—A bowl containing two quarts of water, set in an oven when baking, will prevent pies, cakes, &c., from being scorched.

Catarrh.—Take dry bloodroot, and reduce it to powder—mix it with gum camphor; use it as snuff. It is said to be a certain cure.

Female Obstructions, &c.—Make a syrup of equal parts of heart's ease, spikenard root with the pith out, Turkey root, wild licorice, pond-lily root, a small part of blood-root, and a double proportion of an herb called female flowers. The last often grows by the edges of ponds, and has a leaf and blossoms similar to cowslips, but grows single, one root or stalk by itself, and smaller than the cowslip. The blossom is yellow. It is one of the finest roots for females in the world. Boil in fair water until the substance is extracted; strain, sweeten with honey, add as much rum as will keep it from souring; drink half a gill on going to bed, every night. It will stregthen the system and throw off all obstructions.

Ayer's Cherry Pectoral.—Take 4 grains of acetate of morphia, 2 fluid drachms of tincture of bloodroot, 3 fluid drachms each of antimonial wine and wine of ipecacuanha, and three fluid ounces of syrup of wild cherry. Mix.

If Poison is Swallowed.—If any poison is swallowed, drink instantly half a glass of cool water with a heaping teaspoonful of common salt and ground mustard stirred into it; this vomits as soon as it reaches the stomach: but for fear some of the poison still remains, swallow the whites of one or two eggs, or drink a cup of strong coffee, these two being antidotes for a greater number of poisons than any other dozen articles known, with the advantage of being always at hand.

For a Weak Back.—Take a beef's gall, pour it into 1 pint of alcohol, and bathe frequently. It acts like a charm.

Dr. Davies' Gout Mixture.—Wine of colchicum, one ounce; spirit of nitrous ether, one ounce; iodine of potassium, two scruples; distilled water, two ounces. Mix. A teaspoonful in chamomile tea two or three times a day.

To Keep Cider Sweet.—To every barrel add one and a half gills of mustard seeds, which will keep it sweet for one year.

Brandreth's Pills.—Take 2 pounds of aloes, 1 pound of gamboge, 4 ounces of extract of colocynth, ½ a pound of castile soap, 2 fluid drachms of oil of peppermint, and 1 fluid drachm of cinnamon. Mix, and form into pills.

In Case of Excessive Bleeding.—If the blood comes from a wound by jets or spirts, be spry, or the man will die in a few minutes, because an artery is severed; tie a handkerchief loosely around near the part between the wound and the heart. Put a stick between the handkerchief and the skin, twist it around until the blood ceases to flow, and keep it there until the doctor arrives; if in a position where the handkerchief cannot be used, press the thumb on the spot

near the wound, between the wound and the heart, increas ing the pressure until the bleeding ceases, (do not lessen the pressure until the physician arrives, for an instant,) so as to glue up the wound by coagulation or hardening of the cooling blood.

How to Cure Cancer.—The following is said to be a sure cure for cancer: A piece of sticking plaster is put over the cancer, with a circular piece cut out of the centre, a little larger than the cancer, so that the cancer and a small circular rim of healthy skin next to it is exposed. Then a plaster, made of chloride of zinc, blood-root, and wheat flour, is spread on a piece of muslin the size of this circular opening, and applied to the cancer for twenty-four hours. On removing it, the cancer will be found burned into and appear of the color and hardness of an old shoe sole, and the circular rim outside of it will appear white and parboiled, as if scalded by hot steam. The wound is now dressed, and the outside rim soon separates, and the cancer comes out in a hard lump and the place heals up. The plaster kills the cancer, so that it sloughs like dead flesh, and never grows again. The remedy was discovered by Dr. Fell, of London, and had been used by him for six or eight years with unfailing success, and not a case has been known of the reappearance of the cancer when this remedy has been applied.

Cancer Ointment.—White arsenic, sulphur, powdered flowers of lesser spearwort, and stinking chamomile, levigated together, and formed into a paste with white of egg.

Chinese Depilatory, (to remove superfluous hair).—Crystallized hydrosulphate of soda, 3 parts; quicklime, in powder, 10 parts; starch, 10 parts. Mix. To be mixed with water, and applied to the skin, and scraped off in 2 or 3 minutes, with a wooden knife.

2. Quicklime, 16 ounces; pearlash, 2 ounces; reduce to fine powder and keep in a close bottle. Use as above.

Perfumed Powder for Boxes and Drawers.—Coriander powder, Florentine orris powder, powdered rose leaves, powdered sweet-scented flag-root, of each 2 ounces: lavender flowers, powdered, 4 ounces; musk, 1 scruple; powder of sandlewood, 1 drachm. Mix.

How to Make Sham Champagne.—Take 1 lemon, sliced; 1 table-spoonful of tartaric acid; 1 ounce of race ginger; 1½ pounds of sugar; 2½ gallons of boiling water poured on the above. When blood warm, add 1 gill of distillery yeast, or 2 gills of home-brewed. Let it stand in the sun through the

day. When cold, in the evening, bottle, cork, and wire it. In two days it is ready for use.

How to Kill Vermin on Stock of all Kinds.—Take 1 ounce of *coculus indicus*, which should be bought of any druggist, at from twelve to fifteen cents per pound, and steep it in one gallon of water, and apply it as is recommended for tobacco extract. It will be found quite as effectual, and much more pleasant to use. I have used it with unvarying success for killing lice on canary birds. Dipping them in, keeping the head out, and soak well. It is perfectly safe.

How to Drive away Mice.—Gather any kind of mint and scatter it about; and they will forsake the premises.

Summer Beverage.—Ten drops of oil of sassafras; 10 drops of oil of spruce; 10 drops of oil of wintergreen; 2 quarts of boiling water, poured on 2 great spoonsful of cream of tartar. Add 8 quarts of cold water, the oils, 3 gills of distillery yeast (or 6 of home-brewed), and sweeten it to the taste. In 24 hours, bottle it, and it is a delicious beverage.

To Clear a House of Vermin.—Common green paint, in powder, sold under the name of French green, will clear a house completely of roaches and vermin of every description. So infallible is this remedy that men offer to clear houses by contract, at large prices, on the principle of "no cure, no pay," and they never fail to succeed. Six cents worth is all that is required, and money can be easily and surely made by ridding houses of these pests.

To Destroy Caterpillars.—Boil together a quantity of rue, wormwood, and any cheap tobacco (equal parts), in common water. The liquid should be very strong. Sprinkle it on the leaves and young branches every morning and evening during the time the fruit is ripening.

To Destroy Cockroaches.—The following is said to be effectual: These vermin are easily destroyed, simply by cutting up green cucumbers at night, and placing them about where roaches commit depredattons. What is cut from the cucumbers in preparing them for the table answers the purpose as well, and three applications will destroy all the roaches in the house. Remove the peelings in the morning, and renew them at night.

To Kill Bed bugs.—An effectual lime for the destruction of bed-bugs may be made as follows: Two ounces of red arsenic, ¼ of a pound of white soap, ½ an ounce of camphor dissolved in a teaspoonful of spirits rectified, made into a paste

of the consistency of cream. Place this mixture in the openings and cracks of the bedstead.

Sympathetic or Secret Inks.—Mix equal quantities of sulphate of copper and sal ammoniac, and dissolve in water. Writing done with this ink is invisible until the paper is heated, when it turns a yellow color. Lemon juice, milk, juice of onions, and some other liquids, become black when the writing is held to the fire.

Gold and Silver Coin Detector.—Ten grains of nitrate of silver, and 1 ounce of water.

New Method of Embalming.—Mix together 5 pounds dry sulphate of alumine, 1 quart of warm water, and 100 grains of arsenious acid. Inject 3 or 4 quarts of this mixture into all the vessels of the human body. This applies as well to all animals, birds, fishes, &c. This process supersedes the old and revolting mode, and has been introduced into the great anatomical schools of Paris.

Cough Syrup.—Put 1 quart hoarhound to 1 quart of water, and boil it down to a pint; add 2 or 3 sticks of licorice and a tablespoonful of essence lemon. Take a tablespoonful of the syrup three times a day, or as often as the cough may be troublesome. The above receipt has been sold for $100. Several firms are making much money by its manufacture.

Bengal Lights.—Take of nitrate of potassa (saltpetre,) 8 parts; sublimed sulphur 4 parts, and antimony 1 part, and let them be well mixed in powder and beat firmly into a stout iron cup, and set on fire; and if a little camphor be added it is still more brilliant. Such lights are made use of for communicating at a great distance by sea at night.

Cure for Sore Nipples.—Nursing mothers are sometimes seriously troubled with this painful affliction, and would be willing to make almost any sacrifice to have a cure for it. The following simple mixture, will give immediate relief: Powdered Borax, a small, even teaspoonful; pure water two-thirds of a teacupful, Alcohol one and a half tablespoonful. Mix and use, washing the nipples with it.

Recipe for Cure of Cholera.—Tincture kino 1 ounce, tincture opii 4 drachms, amylum (common starch) 1 ounce, tepid water 6 ounces. Mix. Inject slowly into the bowels. The injection mixture should be of the consistency of thin gruel. If it should come away it must be immediately repeated. If the injection be properly administered and in sufficient quantity it will stop the discharge from the bowels in fifteen min-

utes, and nothing will pass them for several days. The patient is then safe.

A weak mixture of chloroform, spirits camphor and turpentine may also be taken by the mouth.

Cure for Bone Felon.—An old physician gives the following as an infallible remedy: As soon as the parts begin to swell, get the tincture of lobelia and wrap the part affected with cloth thoroughly saturated with the tincture, and the felon is dead.

To Write Secret Letters.—Put 5 cts. worth citrate of potassa in a 1 ounce vial of clear cold water. This forms an *invisible fluid.* Let it dissolve and you can use it on paper of any color. Use a goose quill in writing. When you wish the writing to become *visible,* hold it to a red-hot stove.

Wild Cherry Bitters.—Boil a pound of wild cherry bark in a quart of water, until reduced to a pint. Sweeten and add a little rum to preserve, or, if to be nsed immediately, omit the rum. Dose: a wineglassful three times a day, on an empty stomach.

To Make Soldering Liquid.—Take ½ pound of muriatic acid, ½ ounce of salmoniac; add as much sheet zinc as it will eat. When done, add one half soft water and strain, and it is fit for use.

A Certain Cure for Drunkenness.—Sulphate of iron, 5 grains; magnesia, 10 grains; peppermint water, 11 drachms; spirits of nutmeg, 1 drachm; twice a day. This preparation acts as a tonic and stimulant, and so partially supplies the place of the accustomed liquor, and prevents that absolute physical and moral prostration that follows a sudden breaking off from the use of stimulating drinks.

To Restore Silks Discolored by Acids.—Silks that have changed color by acids, can be restored by using hartshorn. Don't be afraid of it on the silk.

To Remove Dandruff from Hair.—Take a thimbleful of powdered refined borax, let it dissolve in a teacupful of water, first brush the head well, then wet a brush and apply it to the head. Do this every day for a week, and twice a week for a few times, and you will effectually remove the dandruff.

How to Preserve Butter.—Two qts. best common salt, 1 oz. sugar and 1 oz. saltpetre. Take 1 oz. of this composition for 1 lb. of butter, work it well into the mass and close it up.

For use, the butter cured with this mixture appears of a rich and marrowy consistency, and never acquires a brittle

hardness nor tastes salty; but it must be remembered that butter thus cured, should stand 3 or 4 weeks before it is opened. The salts are not sufficiently blended with it, and sometimes the coolness of the nitre will be perceived, which totally disappears afterwards.

This recipe keeps butter 3 years.

How to Make Brown's Bronchial Troches.—Take 1 pound of pulverized extract of licorice, 1½ pounds of pulverized sugar, 4 ounces of pulverized cubebs, 4 ounces of pulverized gum arabic, and 1 ounce of pulverized extract of conium. Mix.

How to Make Lyons Celebrated Kathairon for the Hair—the Original Prescription of the Inventory.—Two gallons castor oil, 3 gallons alcohol. Mix first. Ten oz. tincture cauthanile (officural), 12 oz. oil bergamot; dissolve in small alcohol. Tincture red sander,—proportions say 1 lb. to 5 gal., 95 per ct. alcohol—to suit 4 oz. color 30 gallons.

Medical Herbs, Roots, &c.

For all simple complaints, a preparation of barks or herbs, is to be preferred to more powerful remedies, as they are more harmless, and do not injure the system so much as other prescriptions sometimes do.

The list which we give below will be found to embrace the most important. For the manufacture of BITTERS, a selection may be made from the list, and boiled down to a syrup with sugar. A little rum may be added to preserve.

Sassafras.—It is an aromatic or pleasant tonic. Sassafras, prickly ash, dogwood, and American gentian, make as powerful and pleasant a bitter as foreign gentian, colombo, Peruvian bark, cloves, and cinnamon, which we buy at the drug store.

Mandrake or May Apple.—Needs no description. It is an excellent purgative, in doses from ten to thirty grains, or double that quantity, in a gill of water, or equal quantities of the mandrake juice and molasses may be mixed, and a tablespoonful taken every hour or two till it operates. Indians gather the root in autumn, when the leaves turn yellow, dry it in the shade, and pulverize it for use, as wanted.

Wintergreen.—It is useful in spasmodic asthma, in urinary, and in female weaknesses. It relieves cramp from wind in

the stomach; the juice boiled with sweet oil, wax and turpentine, makes a salve, which is used to heal wounds.

Comfrey.—Boiled in milk, is excellent in dysentery, bowel complaints, immoderate courses, and other diseases. It is beneficial in all cases attended with burning heat in urinary evacuations. A poultice of the pounded root is good for wounds and inflammatory swellings.

Tansey.—Relieves hysterical affections. A wine-glassful of tansy juice will throw off an ague fit, if taken a few minutes before the attack.

Wild Turnip.—Its virtues are destroyed by drying, and by too much pounding. To use it as a medicine it should be scraped, and mixed with something oily. sweet, and mucilaginous. It is useful to old people, in cases of asthma, coughs, &c. It is good for women who are not regular, and a decoction of the root is used for eye-water.

Rhubarb Root.—It is generally cultivated in our gardens for the sake of the stalks, which are made into excellent pies; the root, however, is of great efficacy in some diseases. Six to ten grains are astringent and strengthening to the stomach. In larger doses, from a scruple to half a drachm, it is first purgative, and then astringent. It is, therefore, an excellent medicine for diarrhœa and dysentery, because it evacuates any acrid matter that may be offending the bowels, before it acts as an astringent.

Dysentery.—In diseases of this kind, the Indians use the roots and leaves of the blackberry bush—a decoction of which in hot water, well boiled down, is taken in doses of a gill before each meal, and before retiring to bed. It is an almost infallible cure.

Burdock.—Operates gently on the bowels, sweetens the blood, promotes sweat and urine, and is used in rheumatic, scorbutic, and venereal diseases. Dose of the juice, a wine-glassful; of the decoction, half a pint three times a day.

Fever-few, Feather-few—Is an aromatic tonic. A decoction of the herbs, in hysterics and other female complaints, may be used to advantage.

Chamomile.—A warm decoction of the flowers in large quantities will act as an emetic; in small doses, taken cold, it is an excellent tonic to strengthen the stomach.

Blue Flag.—Grows by the brink of rivers, in swamps, and meadows; blossoms in July, blue flowers, variegated with white, yellow, and purple. A teaspoonful of the juice dilu

ted with water, is an active cathartic, and the decoction for constant drink is used in venereal complaints.

Oak of Jerusalem or Wormseed.—This is a vermifuge or anthelmintic medicine, that is good to destroy worms. A tablespoonful of the juice of the plant expressed or squeezed out is a dose. The seed may be boiled in milk ; give a wineglassful. Or one or two teaspoonfuls of the seed itself may be mixed with molasses or honey, and given to a child two or three years old, on an empty stomach, twice a day and continued several days.

Ladies' Slipper.—Is well known. A decoction of the root is a febrifuge (a remedy for fever), and a fine regulating medicine in female complaints.

American Senna.—Grows well in this country, is very easily raised from the seeds, and ought to be cultivated in every garden. It is well known as a physic for children ; a handful of the leaves to a pint of hot water, and a teacupful or less every hour or two, till it operates.

Charcoal of Wood.—In fifteen or sixteen cases of obstinate constipation of the bowels, Dr. Daniel, of Georgia, administered three tablespoonfuls of pulverized charcoal every half hour, and in about seventeen hours the bowels were freely evacuated. It is slow, but sure. A tablespoonful two or three times a day will remove costiveness. In smaller doses it corrects bad breath, and prevents putrid belching of wind from the stomach. It is a powerful antisepic, or anti-mortification remedy.

Sweet Fern.—Grows in woods and stony places, flowers from June to October, and is well known. It is a powerful medicine to expel the tapeworm, in the dose of a pint a day of the decoction, or one or two teaspoonfuls of the powder ; to be followed on the fifth day by a dose of some kind of physic. It is also good in chronic rheumatism, and a wash of it is considered beneficial in St. Anthony's fire, and other cutaneous affections.

Horse-Radish.—This is an anti-scorbutic and stimulating medicine. It may be taken either in substance or infused in wine, for the scurvy, dropsy, palsy, chronic rheumatism, &c. An infusion of horse-radish in milk is the best cosmetic for the ladies, and, steeped in vinegar, it removes freckles from the face.

Blackberry.—The berry, when ripe, is known to be pleasant and wholesome, and two handfuls of the root, in three pints of milk or water, boiled down to a quart, in the dose of a tea-

cupful every two or three hours, has often cured diarrhœa and dysentery, when the apothecary's medicine has failed.

Dandelion.—A decoction of dandelion will correct an unhealthy state of the stomach and liver, and procure an appetite. It is diuretic, and very beneficial in jaundice. Given in the form of extract, in from three to five-grain doses, three times a day, and continued for a long time, has the happiest effect upon the liver when its disease has assumed a chronic form. The best way of preparing it, is to gather the roots in August and September, press out the juice, and evaporate in shallow dishes exposed to a dry, warm air.

Gold Thread.—The root chewed is good for canker, or other sore mouth; and prepared by decoction, as a gargle in sore throat. The tea is useful in cases of general debility, and loss of appetite.

Wild Cherry—The Bark and Fruit.—The bark of the tree and kernels of the cherry contain a great deal of Prussic Acid, to which their medicinal virtues are to be attributed. The bark is a very powerful antiseptic, and is very useful in the preparation of dentifrice. It is also useful in Diarrhœa, Jaundice, and for worms. Generally taken in infusion, an ounce of the powder to a quart of boiling water. The Cherries also are used in medicine, and may be employed with, or without peach kernels. They are useful as a tonic and a remedy for indigestion, and particularly as a restorative for convalescents from Dysentery. Made in a syrup; or bruised, and given in decoction.

Witch Hazel.—A tea of the leaves and bark is useful to wash putrid sores; and it will remove that diseased or dead substance known as "Proud Flesh." For this purpose a poultice should be made of a strong infusion; applied to the sore, or it may be washed gently with the tea.

Red Raspberry.—This also is an astringent. A tea made of the leaves is an excellent remedy for the bowel complaints of children. A little of the Bark of Slippery Elm improves its efficacy. It should also be given in the form of an injection. The tea is used as a wash and gargle; and if drank freely it has a good effect in a cankerous state of the mouth, throat, and stomach.

Yellow Dock Root.—This is one of the most valuable remedies known in disease of the Skin. The best preparation is to bruise the fresh roots in a mortar, and add cream, or fresh butter, enough to make an ointment; and it may also be taken internally at the same time, either in decoction or com-

bined, with such articles as are useful for the internal treatment of bad humors, and scrofulous conditions of the system. It is a certain and safe remedy for the troublesome disease known as the Itch.

Golden Seal Root.—This is an admirable remedy in case of dyspepsia. A half teaspoonful of the powder, with a half teacupful of boiling water, taken immediately after eating, when the food distresses one, often gives relief. It is an article in the "Spiced Bitters."

Balmony Herb.—This is a tonic and laxative, and is employed to good advantage in Jaundice, Dyspepsia, Diseases of the Liver, Loss of Appetite, and General Debility. It enters into the composition of "Spiced Bitters."

Elder.—An infusion of Elder-flowers is good for feverishness and sore mouth in children. Add a pint of boiling water to a tablespoonful of the flowers.

The inner bark with cream, fresh butter, or sweet oil, makes a nice cooling ointment for burns, and other inflamed sores.

American Poplar Bark.—A tea made of the bark is very useful in cases of debility, especially those of long standing, and also for feeble digestion, worms, and a diseased condition of the urinary organs. Consumptive people have received great benefit from its use. It is an ingredient in the "Spiced Bitters" of Botanical physicians.

Origin of the Dog.

An impenetrable veil of mystery hangs over the origin of the Dog. Writers on the animal—philosophers and others well versed in animated nature generally, cannot agree on the question of the origin of the dog—they cannot determine whether that animal was an original work of the Creator, or whether he has been produced by intermixture of animals of the Hyena and Fox species. Doubt on this subject will probably never be removed, till time shall be no more, when we shall become acquainted with this amongst other and for the present abstruse and dark mysteries of animated nature.

The well known Jewish author, Josephus, Chapter 6, Book 9, has an interesting passage in reference to dogs in the following words: "When Jehu came to his palace with his friends, he bade his servants to take up Jezebel, [who had

been thrown from a tower and killed,] but those who were so appointed to bury her, found nothing else remaining but the extreme parts of her body, *for all the rest were eaten by dogs.*"

We are told in the Roman history, that once on a time the great city of Rome was besieged by a numerous host of enemies, the dogs of the city were posted on the hills around, and on a certain occasion failed to give notice of the foe stealthily creeping up the various hills around the city. The city on that night would have been captured, but the geese, more wakeful than the dogs, began to *cackle*, the garrison were alarmed and the enemy repelled.

It is quite evident from these few allusions to the dog, that the animal was well known by the ancients.

We have an allusion, also, to dogs in Isaiah, 56 chap., ver ses 10, 11.

"His watchmen are blind—they are all ignorant—they are all *dumb dogs*—they cannot bark, sleeping, lying down, loving to slumber. Yea, they are *greedy dogs*, which cannot have enough."

General Treatment of the Dog.

The breeding of dogs of peculiar excellence will meet with undoubted success if one or two simple directions are attended to.

Do not be satisfied with the appearance of either parent. The true or real pedigree, as far as possible, should be carefully ascertained, for it not unfrequently happens that a whelp, apparently of high breeding, will be accidentally produced when one parent is absolutely of a quite different breed—perhaps a common cur. From such stock it would be unsafe to breed, as the probability in such cases would be, that the whelp would more or less take after the bad blood—called throwing back. The one pedigree, therefore, should be ascertained for at least four generations.

The next consideration should be the age and health of the parents. The male should be at least two years old—the female at least fifteen months. Males need not be rejected as unfit, until their eighth year, provided they may have woon—have not been hardly used, and are in good health. Females need not be rejected till their sixth year.

Both parents should be in perfect health. The female goes

with young sixty-three days; she has from four to thirteen young at a birth. The whelps are born blind; their eyes open the eleventh or twelfth day. The dam should not be permitted to breed oftener than three times in two years, nor to rear more than five pups; if delicate, she must not rear so many. If the whelps are very valuable, you can readily procure a foster-nurse, who, without difficulty, can be induced to adopt as many whelps as you may find it necessary to remove from the dam. The whelps should not be suckled longer than six weeks; five, or even four, is sufficiently long, if necessity calls for their removal so soon; the only difference being, that, in such cases, they require more care.

Rabies, or Canine Madness, sometimes Improperly Called Hydrophobia.—Hydrophobia, a term expressing *fear of water*, is when applied to this malady as occurring in the dog, grossly incorrect, a dog laboring under rabies drinking water not only willingly, but greedily to the very last.

We need scarcely say that no curative treatment will avail, if a dog is seized with this terrible disease; our duty, therefore, merely consists in describing the symptoms which indicate the approach of danger, that the affected animal may be timely destroyed; and also to point out the treatment to be pursued in the event of a fellow-creature having been bitten. One of the earliest symptoms of rabies in the dog is *restlessness*. He is constantly turning round and round before he will lie down; his countenance becomes anxious; his eyes bloodshot; he fancies that he sees objects around him which have no real existence, and he snaps at the empty air; his fondness for his master increases, and with it his propensity to lick the hands and face—a filthy practice at any time, and one most dangerous;—the appetite becomes depraved, his natural food is neglected, and, at the same time, every sort of filthy trash is greedily devoured; *eating his own excrement* is an early symptom, and so sure a one, that the moment a dog is seen doing so he should be destroyed, or, at all events, carefully confined.

The True Way of Breaking Horses.

The first and most important thing to be accomplished is to win the horse's confidence, which may be done by uniform actions of a kindly disposition in his management. He takes men exactly for what he proves himself by actions. By kind treatment, he learns to associate with man's feeling

of protection and security, and he can have no fear or doubt, because never taught to doubt by deception.

The child has confidence in his parents in proportion to the fidelity of the parents in inculcating and practising those principles of truth in his early training. But once finding them unmindful of their promises, confidence in them is correspondently impaired. If you are faithful in fulfiling your promises to the child, he will expect exactly what you promise. Here proof becomes faith, because he has never been deceived by the want of performance. Even among men the principle is the same. That man, who is always found truthful, and who performs exactly as he promises to do, becomes a standand of public confidence and trust; but he who disregards truth and the principles of honor, becomes an object of suspicion to all knowing him. As the child, then, is the reflex of the love and truth of the parents in confidence, and the public in him of undoubted integrity —so we are forced to believe the horse becomes in the character of his habits what he is, in exact proportion to the teaching and example to which he may have been subject.

HOW TO FEED, WATER AND DRIVE HORSES.

Do not feed or water heavy before driving, filling the stomach with water and food; water destroys the juices of the stomach, weakening digestion. The grain becomes swollen and generates a gas, filling the stomach with wind; the stomach becoming diseased, the BOT will work his head into the coating of the stomach. All grain will digest best while the horse is standing still; and all food that passes off without digestion weakens the action of the stomach and bowels, and, in many cases, will scour the horse. The less you feed before driving the better. Then, again, you should water very little on the road. Feed mostly at night; food will then all digest and make flesh and blood. I should advise not more than two quarts in the morning, and the same at noon. I do not feed in the morning, neither do I water. If I was going to make a long and fast drive, I should feed twelve quarts the night before, then my horse would be strong, and feel light and active, and do his work easy. By giving him a little water, the horse will fully digest what he has eaten; if you weaken the juices, of course you weaken digestion. A horse should only be fed what he can easily digest. I think by so doing you will save one third of the grain formerly given. Diseases are caused by too much food and water; the water destroys the juices, and disables digestion; by feeding

most of the grain whilst the horse is at rest, it will fully digest, and leave the horse strong and able to do his work

Giving a great amount of water, diseases the blood and deadens the hair. The water must pass in some way; it can't all pass in the urine, and it passes off through the pores of the skin, and causes the hair to become gummed, and makes the horse very hard to clean. So much water passing off through the pores of the flesh destroys the roots of the hair, and causes it to look dull and faded; then, again, you should be cautious not to drive your horse in cold water, when warm, or throw water on him; so doing, chills the blood, separates the blood from the watery substances that the blood forms from, and causes disease, the skin will become full of small tumors and the hair fall off. By avoiding too much water on the road, and too much food before driving, and by keeping the horse warm *after* driving, you avoid disease.

SPECIAL ADVICE IN REFERENCE TO THE FEEDING OF HORSES.

Never give a horse whole grain. Bruising and wetting it with soft water, you save thirty per cent. of its nutricious effects. Steam it in preference to wetting, if you have facilities for doing so. Feed your horse two hours before he begins his day's work. Give him the largest feed at night. Never tie him to a rack; it is cruel to thus prevent a horse from lying down when he is tired. The best way is to take away your rack altogether, and arrange your stable so as to make it unnecessary to tie up the horse. The stable should alway be dry and well littered. Never give your horse hard water, if soft water is to be had. If you cannot get soft water, draw the hard water out of the well two hours before you let him drink it. Beans should be full a year old before they are fit to feed horses; they should be bruised, the same as grain, not ground.

HORSE FEED MIXTURE

YOUATT recommends for horse feed, the following mixture: Cut hay, two parts; cut straw, three parts—add to this a quantity of bruised beans, oats, or other grain—wet the whole with soft water, and mix it well. Do not feed your horse too much hay, as it is not only a waste of provender, but when he is put to work with an overloaded stomach it endangers his wind. If left to pull hay out of the rack at pleasure, a horse will eat or waste some thirty pounds a day, whereas, by cutting up his hay and mixing it with oth-

er feed, as above described, ten pounds is an ample abundance for twenty-four hours. Horses, when worked, should be fed three or four times a day with a mixture of hay, straw, and grain, as above described. Give them their food in the manger, be careful that it is sweet and clean. By following these rules, horses will always be in good condition—will not have that swelled belly so peculiar to animals who are allowed to fill their stomachs with hay—and will usually enjoy good health.

HOW TO GET A COLT FROM PASTURE.

Go to the pasture and walk around the whole herd quietly, at such distance as not to cause them to scare or run. Then approach very slowly; if they stick up their heads and seem to be frightened, hold on till they become quiet, so as not to run them before you are close enough to drive them in the direction you want them to go. When you begin to drive, do not flourish your arms or halloo, but gently follow them off, leaving the direction free you wish them to take. Thus taking advantage of their ignorance, you will be able to get them in the pound as easily as the hunter drives the quails into his net. For if they have always run in the pasture uncared for, (as many horses do in prairie countries and on large plantations,) there is no reason why they should not be as wild as the sportsman's birds, and require the same gentle treatment, if you want to get them without trouble; for the horse, in his natural state, is as wild as any of the undomesticated animals, though more easily tamed than most of them.

HOW TO STABLE A COLT.

The next step will be to get the horse into a stable or shed. This should be done as quietly as possible, so as not to excite any suspicion in the horse of any danger befalling him. The best way to do this, is to lead a broken horse into the stable first and hitch him, then quietly walk around the colt and let him go in of his own accord. Be extremely deliberate and slow in your movements, for one wrong move may frighten your horse, and make him think it necessary to escape at all hazards for the safety of his life—and thus make two hours' work of a ten minutes' job; and this would be all your own fault, and entirely unnecessary—for he will not run unless you run after him, nor will he try to break away unless you attempt to force him into measures. If he does not see the way at once, and is a little fretful about going in, do not undertake to drive him, but give him a little less

room outside, by gently closing in around him. Do not raise your arms, but let them hang at your side, for you might as well raise a club: the horse has never studied anatomy, and does not know but they will unhinge themselves and fly at him. If he attempts to turn back, walk before him, but do not run; and if he gets past you, encircle him again in the same quiet manner, and he will soon find that you are not going to hurt him; and then you can walk so close around him that he will go into the stable for more room, and to get farther from you. As soon as he is in, remove the quiet horse and shut the door. This will be his first notion of confinement—not knowing how he got into such a place, nor how to get out of it. That he may take it as quietly as possible, see that the shed is entirely free from dogs, chickens, or anything that would annoy him. Then give him a few ears of corn, and let him remain alone fifteen or twenty minutes, until he has examined his apartment, and has become reconciled to his confinement. And now, while your horse is eating those few ears of corn, see that your halter is ready and all right, and reflect upon the best mode of operations; for in horse-breaking, it is highly important that you should be governed by some system.

OBJECTS OF FEAR.—HOW TO PREVENT FEAR IN A HORSE.

Whatever the horse understands to be harmless he does not fear; consequently great pains should be taken to cause him to examine and smell such things as are likely to frighten him in after life. This should be attended to in his early education, since early impressions are strong in the horse. A log or stump by the roadside, if regarded with suspicion, should be approached slowly and cautiously; to the imagination of the horse such things are supposed to be some great beast that may spring upon him, but which he will soon comprehend to be harmless if obliged to examine its nature in his own way, by advancing to the object quietly and allowing him to understand it fully by smelling and breathing with the nose. The boy frightened by a false face, will care nothing about it after he takes it in his hands and examines it; and the principle is the same in familiarizing horses to objects of fear.

If your horse is frightened at an umbrella, you can soon learn him to be used to that. Go into the stable with him, and first let him look at the umbrella before it is opened—let him touch it with his nose. Open it a little way, and then let him see it, and finally open it wide. By ordinary patience you can soon learn the horse to have the umbrella

opened suddenly in his face, without his being afraid of it. By a similar treatment you can break any horse from scaring at almost anything that may look frightful to him. If you wish to make a trial of this theory, just take a horse into the stable, and let him examine the frightful object a few minutes, after his mode of examining things, and you will be perfectly satisfied. There is a singular fact connected with taming the horse that I would have never believed if I had not tried it. If you accustom him to any particular object by showing it to him on one side, only, he will not be afraid when he sees it with the eye on that side, but he will be afraid if you approach him with it on the other side. It is therefore necessary to pacify him on both sides in all cases. After you have accustomed him to the umbrella, or whatever you may wish to make him familiar with, on his right side, repeat the operation on the left side in the same manner as if you had not approached him at all.

THE KIND OF HALTER TO BE USED, AND HOW TO PUT IT ON THE COLT.

Never use a rope halter. The cords of the rope are hard, and appear to aggravate and excite distrust rather than confidence; but by all means procure a leather halter made of bridle leather, so it will feel soft and pliable to the touch, and to fit tolerably tight on the head, as not to feel uncomfortable. Before putting a halter upon the colt, he must be rendered familiar with it by caressing him and permitting him to examine the article with his nose. Then place a portion of it over his head, occasionally giving it a slight pull, and in a few minutes he will be accustomed to these liberties, and then the halter may be fastened on properly. To teach him to lead is another difficulty. Stand a little on one side, rub his nose and forehead, take hold of the strap and pull gently, and at the same time touch him very lightly with the end of a long whip across his hind legs. This will make him start and advance a few steps. Repeat the operation several times, and he will soon learn to follow you by simply pulling the halter. The mouth of the colt should be frequently handled, after which introduce a plain snaffle between his teeth and hold it there with one hand while you caress him with the other. After a time he will allow the bridle to be placed upon him. The saddle can then be brought in and rubbed against his nose, his neck and his legs; next hang the stirrup strap across his back, and gradually insinuate the saddle into its place. The girth should not be fastened until he becomes thoroughly acquainted with

the saddle. The first time the girth is buckled it should be done so loosely as not to attract his attention; subsequently it can be tightened without inspiring him with fear, which if fastened immediately it would most certainly do. In this manner the wildest colt can be effectually subjugated by such imperceptible degrees that he gives tacit obedience before he is aware of his altered condition.

TO BREAK A HORSE TO HARNESS.

Take him in a tight stable, take the harness and go through the same process as you would with the saddle, until you get him familiar with them, so you can put them on his back and rattle them about without his caring for them. As soon as he will bear them, put on the lines, caress him as you draw them over him, and drive him about in the stable till he will bear them over his hips. The lines are a great aggravation to some colts, and often frighten them as much as if you were to raise a whip over them. As soon as he is familiar with the harness and lines, take him out and put him by the side of a gentle horse, and go through the same process that you did with the blinds when you are breaking a horse to harness.

After fixing the lines, then hitch the horse to a small log that he can draw very easy, with long traces, frequently turning him, so that the traces will draw lightly against his legs—frequently stopping and petting him; then hitch him to something heavier; then get behind him and drive him. By thus working with him you will make a strictly true horse of him—he also gets so that he is not afraid of the traces or harness. You can then proceed to hitch him to a buggy or waggon. Persons should not drive fast at first hitching a colt in harness; he should be handled very careful at first. In handling colts in this way you will have no trouble with them, but will have a much better broke horse, and one that would be more safe for a family. A horse broken in this way is not half so easily spoiled as one broken by any other process.

In breaking horses to ride they should be handled in very much the same way as I have spoken of. After bitting them sufficiently you may proceed to saddle them; then ride then over two or three miles at a time—not enough to tire them.

TO BREAK HORSES TO STAND THE FIRE OF A GUN.

You commence by administering the three articles first mentioned, in the nostrils · this will prevent him from smelling the powder. Then load your pistol—but very light, so

as to make the report as light as possible; every time you fire, give him a small piece of an apple, with some powder on it; then rub and pat him on the head and neck. When you first commence firing, stand close to the horse's shoulders, rest your arms on his withers. After you have fired a sufficient number of times, mount the horse and shoot from his back. Keeping up this practice for a short time, the horse will get so that he will not care anything about the fire of a gun at any time or place.

NECESSITY OF REPETITION OF LESSONS AND A THOROUGH TRAINING.

The horse must be convinced by repeated proofs of being over-matched that resistance is useless. For since his willingness and rebellion are each based upon the limited reasoning of his experience, he must be thoroughly convinced by experience that unconditional submission is the only alternative; this you cannot prove to the understanding of the horse without repeating your lessons until he submits unconditionally. But as nursing and care is to the patient over the force of disease, so is the subjugation of the horse—his submission should be encouraged and rewarded by kindness, and feeding from the hand with little presents of such things as he likes. That master is supreme in his control, and submission to his commands becomes a pleasure, who has the power to enforce his will, but who exercises it with the sweetening encouragement of love. While force is necessary, and you have the means of making your horse almost a plaything in your hands, let the silken chord of love be the cement that fixes and secures this submission to your will. A good-natured, clever man, it is admitted, can teach a horse almost anything, and it has become a proverb that kindness will lead an elephant by a hair. Show your horse exactly what you want him to do, and endeavor to use the patience and reason in teaching and controlling him, you would believe necessary for yourself to understand if placed in like circumstances. Ignorant of the language and intentions of such a teacher, who even preserved his patience, and refrained from abuse, what progress would you make as a pupil—gifted as you are with all your intelligence? If possible, ennoble and elevate your feelings by realizing your responsibility to yourself, to the community, and to the noble animal committed to your charge. Make your horse a friend by kindness and good treatment. Be a kind master, and not a tyrant—make your horse a willing servant, and not a slave.

HOW TO PROCEED WITH THE COLT AFTER HALTERING.

The first time you halter a colt you should stand on the left side, pretty well back to his shoulder, taking hold of that part of the halter that goes around his neck, then with your two hands about his neck you can hold his head to you, and raise the halter on it without making him dodge, by putting your hands about his nose. You should have a long rope or strap ready, and as soon as you have the halter on attach this to it, so that you can let him walk the length of the stable without letting go the strap, or without making him pull on the halter; for if you only let him feel the weight of your hand on the halter, and give him more rope when he runs from you, he will never rear, pull or throw himself, yet you will be holding him all the time, and doing more towards gentling him than if you had the power to snub him right up, and hold him to one spot; because he knows nothing about his strength, and if you don't do anything to make him pull, he will never know what he can do in that way. In a few minutes you can begin to control him with the halter, then shorten the distance between yourself and the horse by taking up the strap in your hand. As soon as he will allow you to hold him by a toleraly short strap, and to step up to him without flying back, you can begin to give him some idea about leading.

But to do this, do not go before and attempt to pull him after you, but commence by pulling him very quietly to one side. He has nothing to brace either side of his neck, and will soon yield to a steady, gradual pull of the halter; as soon as you have pulled him a step or two to one side, step up and caress him, and then pull him again, repeating this operation until you can pull him in every direction, and walk about the stable with him; this you can do in a few minutes, for he will soon think when you have made him step to the right or left a few times, that he is compelled to follow the pull of the halter, not knowing that he has the power to resist your pulling; besides, you have handled him so gently that he is not afraid of you, but rather likes you. After you have given him a few lessons of this kind, at proper intervals, he will be so tame that if you turn him out to pasture he will come up to you to be caressed every opportuuity he gets.

While training him in the stable, you should lead him about some time before you take him out, opening the door, so that he can see out, leading him up to it and back again, and then past it. See that there is nothing on the outside

to make him jump when you take him out, and as you go out with him, try to make him go very slowly, catching hold of the halter close to the jaw with your left hand, while the right is resting on the top of his neck, holding to his mane. Do not allow anyone to be present or in sight, during your operations, either in or outside the stable. If you are entirely alone, and manage your colt rightly, you will soon be able to lead and hold him as easily as you could a horse already broken.

DO NOT TRY TO FORCE THE COLT IF EXCITED.

When excited the colt is not in a condition to understand what you require of him, or to be submissive. You should also be careful not to train the colt until he becomes heated and confused. But little should be required at a time, and hold to that point until you gain it thoroughly before you undertake to do more. For example: in making a colt follow, if he submits ever so little, caress and reward him for it, and so continue and you will have no trouble.

When you resort to force do it sharply, so as to impress him as much as possible with your power.

HOW TO PROCEED IF A COLT IS STUBBORN.

If the animal you are operating upon seems to be a stubborn or *mulish* disposition rather than wild; if he lay back his ears as you approach him, or turn his heel to kick you, he has not that regard or fear of man that he should have, to enable you to handle him quickly and easily; and it might do well to give him a few sharp cuts with the whip, about the legs, pretty close to the body. It will crack keen as it plies about the legs, and the crack of the whip will affect him as much as the stroke; besides, one sharp cut about the legs will affect him more than two or three over the back, the skin on the inner part of the legs or about his flanks being thinner, and more tender than on his back. Do not whip him much, only just enough to scare him; it is not to hurt the horse that we whip him; we do it to scare bad disposition out of him. But whatever you do, do quickly, sharply and with a good deal of fire, but always without anger. If you go to scare him at all, you must do it at once. Never go into a pitched battle with your horse, and whip him until he is mad, and will fight you: you had better not touch him at all, for you will establish, instead of fear and regard, feelings of resentment, hatred, and ill-will. It will do him no good, but harm, to strike him, unless you frighten him; if you succeed in frightening him, you can whip him without making

him mad ; for fear and anger never exist together in the horse, and as soon as one is visible, you will find that the other has disappeared. As soon as you have frightened him, so that he will stand up straight and pay some attention to you, approach him again and caress him a good deal more than you whip ped him ; thus you will excite the two controlling passions of his nature, love and fear ; he will love, and fear you too ; and as soon as he learns what you require, he will obey quickly.

If the colt is of too mulish a disposition to yield to careful and gentle treatment, as here given, you must resort to the several measures recommended for taming vicious horses.

TO MAKE A COLT FOLLOW UNDER THE WHIP.

After the colt comes around to you readily by pulling a little on the halter, and follows freely, take your whip in the right hand ; pull upon the halter a little, saying : "Come here, Sir !" And at the same time tap lightly with the whip over the hips ; he will come to you mainly because you have taught him to yield to a slight pull upon the head, and will come to you at this signal, and because he wishes to get away from the touch of the whip behind. As soon as he comes to you, caress him and feed him from the hand with something he likes ; repeat this, each time pulling upon the halter, until he will come to you as readily by tapping with the whip as he did at first to the halter. Now, instead of hitting with the whip, commence by snapping it behind him ; if he comes, caress and encourage as before, and so repeat, at each time increasing the distance from him, until he will follow or come to you quickly by cracking the whip.

A few lessons of the foregoing kind will make him run after you, when he sees the motion of the whip—in twenty or thirty minutes he will follow you around the stable. After you have given him two or three lessons in the stable, take him in a small lot and train him ; and from thence you can take him into the road, and make him follow you anywhere, and run after you.

HOW TO MAKE A HORSE STAND STILL WITHOUT HITCHING.

After you have well broken him to follow you, stand him in the centre of the stable—begin at the head to caress him, and gradually work backwards. If he moves, give him a cut with the whip, and put him back to the same spot from where he started. If he stands, caress him as before, and continue gentling him in this way until you can get around him without making him move. Keep walking round him, increasing your pace, and only touch him occa-

sionally. Enlarge your circle as you walk around, and if he then moves, give him another cut with the whip and put him back to his place. If he stands, go to him frequently and caress him, and then walk round him again. Do not keep him in one position too long at a time, but make him come to you occasionally, and follow you around the stable. Then stand him in another place, and proceed as before. You should not train him more than an hour at a time.

HOW TO LEAD A COLT WITH A BROKE HORSE.

If you should want to lead your colt by the side of another horse, you must first put the horse into a stable with the colt. You first attach a second strap to the colt's halter, and lead your horse up alongside of him. Then get on the broke horse and take one strap around his breast under the martingale, (if he has any on,) holding it on your left hand. This will prevent the colt from getting back too far; besides you have more power to hold him, with the strap pulling against the horse's breast. The other strap take up in your right hand to prevent him from running ahead; then turn him about in the stable, and if the door is wide enough ride out with him in that position; if not, take the broke horse out first, and stand his breast up against the door, then lead the colt to the same spot and take the straps as before directed, one on each side of his neck, and then let some one start the colt out, and as the colt comes out, turn your horse to the left, and you will have them right. You can manage any kind of a colt this way, without trouble; for, if he tries to run ahead, or pull back, the two straps will bring the two horses facing each other, so that you can very easily follow up his movements without doing much holding, and as soon as he stops running backward, you are right with him, and all ready to go ahead. If he gets stubborn and does not want to go, you can remove all his stubbornness by riding your horse against his neck, thus compelling him to turn to the right; and as soon as you have turned him about a few times, he will be willing to go along. The next thing, after you are through leading him, will be to take him into a stable and hitch him in such a way as not to have him pull on the halter.

HOW TO LEAD A COLT INTO A STABLE.

You should lead a broken horse into the stable first, and get the colt, if you can, to follow in after him. If he refuse to go, step up to him, taking a little stick or switch in your right hand; then take hold of the halter close to his head with your left hand, at the same time, reaching over his

back with your right arm so that you can tap him on the opposite side with your switch; bring him up facing the door, tap him slightly with your switch, reaching as far back with it as you can. This tapping, by being pretty well back, and on the opposite side, will drive him ahead, and keep him close to you; then by giving him the right direction with your left hand you can walk into the stable with him. I have walked colts into the stable this way in less than a minute, after men had worked at them half-an-hour, trying to pull them in. If you cannot walk him in at once in this way, turn him about and walk him around awhile until you can get him up to the door without pulling at him. Then let him stand a few minutes, keeping his head in the right direction with the halter, and he will soon walk in of his own accord. Never attempt to pull the colt into the stable; that would make him think at once that it was a dangerous place, and if he was not afraid of it before, he would be then. Besides, we do not want him to know anything about pulling on the halter. If you want to tie up your colt, put him in a tolerably wide stall, which should not be too long, and should be connected by a bar or something of that kind to the partition behind it; so that, after the colt is in he cannot go far enough back to take a straight, backward pull on the halter; then by tying him in the centre of the stall, it would be impossible for him to pull on the halter, the partition behind preventing him from going back, and the halter in the centre checking him every time he turn to the right or left. In a stall of this kind you can break any horse to stand tied with a light strap, anywhere, without his ever knowing anything about pulling. For if you have broken your horse to lead, and have taught him the use of the halter (which you should always do before you hitch him to anything), you can hitch him in any kind of a stall, and if you give him something to eat to keep him up to his place for a few minutes at first, there is not one colt in fifty that will pull on his halter, or ever attempt to do so.

This is an important feature in breaking the colt, for if he is allowed to pull on the halter at all, and particularly if he finds out that he can break the halter, he will never be safe.

The Eureka Bridle.

The most powerful means of learning a colt to lead is by the use of what is designated or called the EUREKA BRIDLE.

HOW TO MAKE THE EUREKA BRIDLE.

Take a cotton cord made of fine yarn such as is sometimes used for a bed cord or clothes line, usually about three eighths of an inch thick. If you cannot get cotton cord hemp or anything of the kind that is strong enough will answer the purpose. Let it be about fifteen feet long, tie one end into a hard knot, just as you would to prevent its raveling; tie another knot about ten inches or a little more from the one on the end, but before you draw it tight, put the knot on the end through. You have now a loop that will not slip, made on the same principle that a rope is tied around the neck of a horse to hitch with, so as not to tighten upon the neck by pulling upon it. This loop should be just large enough to slip over the under jaw of the horse you wish to train; put this loop over the lower jaw, then, while standing on the near side, take the cord in the left hand and bring over the neck by passing the left hand under the neck to the opposite side towards the mane, bring the right hand over the neck and take the cord from the left and pass back to the loop, and put through from the top side, until the part over the neck is drawn down like a check-rein; now take hold of the end of the rein, and you will find you have a means of power in it that makes the strongest horse almost a plaything in your hands.

The objection to the use of the Eureka Bridle in the training of the innocent colt, is, that the ignorant are inconsiderate in its use. Instead of using it with the utmost mildness a little resistance on the part of the colt is made an excuse to use it in the most severe manner, until the colt either submits unconditionally, or becomes so desperate with pain as to be entirely reckless and regardless of the utmost efforts.

When your horse resists too much you will always find it to your advantage to put him away for a short time until he becomes cool. In fact, the great secret of training is in not training too long, and repeating. If you intend using the Eureka Bridle as a means of subduing your colt, put it on after you tamper him on three legs, with the strap over the back. As soon as he submits cleverly to this step, instead of fastening up the leg as by the method already described, take off your strap. Then put on the Eureka Bridle gently, when step to one side and back, and say, "Come here, sir!" pulling a very little upon the bridle, just enough to bring his head towards you a little. Now step up to him and pat him on the neck, and say, "You are a fine fellow." Then try again in the same way, and so repeat until he will come to you

quite freely. You may increase your force upon the bridle in proportion to his submission, but not if he show stubbornness. You may then step to the other side and repeat the lesson until he will come to you either way cheerfully. Now you wish him to *follow you:* continue your training in this way, gradually pulling a little more on a line with his body, until he will follow as well ahead as he does sideways.

HOW TO BREAK HORSES TO RIDE.

If a colt, you must first supple the muscles of the back before permitting much weight to be carried. You must keep in mind that he is not accustomed to carry weight, and that to put one hundred and fifty pounds on would be entirely wrong. You must give the colt to understand that you are his friend. It will require but a few days to supple the muscles of the neck and back; then you have a horse that will guide easily. After the first three days, the horse will carry one hundred and twenty-five pound easier than at first he would carry forty.

You will now fasten the saddle on, but not too far forward; buckle the girths tight, and let him remain a few moments; then approach him gently, pat him on the neck, and draw up the reins tight, with the left hand to the withers; put the foot in the stirrup, and bear gently on the saddle, then pat him gently on the back and rump, speaking very low during the time. Then rise gently, throwing the right leg over the saddle, and sit perfectly still for a few moments; then dismount and caress him, patting his head and back, after doing so a few times he will be as submissive as a lamb.

AS TO HANDLING THE FEET OF A HORSE.

Should the colt refuse to have his feet handled, he may be made to submit by reproving with the bridle and putting a small strap on the hind foot, then pull on this strap and bring the foot up; then at the moment he kicks, bring down on the mouth sharply with the bridle. In a short time he will submit to your control unconditionally. The same principle applies to the use of this under all circumstances. It is a means of reproof, and certainly has a powerful effect upon a horse.

HOW TO TEACH A HORSE TO PACE.

First take nine or ten pound of lead, divide in four parts, equal to three and three-quarter inches, by four and a half

in size; make two holes in each end of these leads, then fasten two of them together and have them padded. Then fasten them on the horse's legs, one on each hind leg, just above the ankle joint. Ride your horse briskly with those weights upon his ankles, at the same time pulling each rein of the bridle alternately. By this means you immediately throw him into a pace. After you have in this way trained him to some extent, change your leaden weights to something lighter; leather paddings, or something equal to it will answer the purpose. Let him wear those weights until he is perfectly trained. By adopting this plan, you will speedily make a smooth and easy pacer of any horse.

MANAGEMENT OF WILD HORSES.

Cause your horse or colt to be put in a small yard, stable, or room. If in a stable or room, it ought to be large in order to give some exercise with the halter before you lead him out. If the horse belongs to that class which only appears to fear man, you must introduce yourself gently into the stable, room, or yard where the horse is. He will naturally run from you, and frequently turn his head towards you; but you must walk about extremely slow and softly, so that he can see you whenever he turns his head towards you, which he never fails to do in a short time—in a quarter or half an hour. I never knew one to be much longer without turning his head towards me. At the very moment he turns his head, hold out your left hand towards him, and stand perfectly still, keeping your eyes upon the horse, watching his motions, if he make any. If the horse does not stir for ten or fifteen minutes, advance as slowly as possible, and without making the least noise, always holding out your left hand. If the horse makes the least motion when you advance towards him, stop and remain perfectly still until he is quiet. Remain a few moments in this condition, and then advance again in the same slow and almost imperceptible manner. If the horse then stirs again, stop without changing your position. It is very uncommon for the horse to stir more than once after you begin to advance; yet there are some exceptions. He generally keeps his eyes steadfast upon you, until you get near enough to touch him on the forehead. When you are thus near to him, raise slowly and by degrees your hand, and let it come in contact with that part just above the nostrils, as possible. If the horse flinches (as many will), repeat with great rapidity these light strokes upon the forehead, going a little further up towards his ears by degrees, and descending with the

same rapidity until he will let you handle his forehead all over. Now let the strokes be repeated with more force over all his forehead, descending by lighter strokes to each side of his head, until you can handle that part with equal facility. Then touch in the same light manner, making your hands and fingers play around the lower part of the horse's ears, coming down now and then to his forehead, which may be looked upon as the helm that governs all the rest.

Having succeeded in handling his ears, advance towards the neck, with the same precautions, and in the same manner; observing always to augment the force of the strokes whenever the horse will permit it. Perform the same on both sides of the neck, until he lets you take it in your arms without flinching.

Proceed in the same progressive manner to the sides, and then to the back of the horse. Every time the horse shows any nervousness, return immediately to the forehead, as the true standard, patting him with your hands, and thence rapidly to where you had already arrived, always gaining ground a considerable distance farther on every time this happens. The head, ears, neck, and body being thus gentled, proceed from the back to the root of the tail.

This must be managed with dexterity, as a horse is never to be depended on that is skittish about the tail. Let your hand fall lightly and rapidly on that part next to the body a minute or two, and then you will begin to give it a slight pull upwards every quarter of a minute. At the same time you continue this handling of him, augment the force of the strokes as well as the raising of the tail, until you can raise it and handle it with the greatest ease, which commonly happens in a quarter of an hour in most horses, in others almost immediately, and in some much longer. It now remains to handle all his legs; from the tail come back again to the head—handle it well, as likewise the ears, breast, neck, etc., speaking now and then to the horse. Begin by degrees to descend to the legs, always ascending and descending, gaining ground every time you descend until you get to his feet.

Talk to the horse while you are thus taming him; let him hear the sound of your voice, which at the beginning of the operation, is not quite so necessary, but which I have always done in making him lift up his feet. "Hold up your foot," you will say, at the same time lifting up his foot with your hand. He soon becomes familiar with the sounds, and will hold up his foot at command. Then, proceed to the hind feet, and go on in the same manner; and in a short time the

horse will let you lift them, and even take them up in your arms.

All this operation is no magnetism, no galvanism; it is merely taking away the fear of the horse generally has of man, and familiarizing the animal with his master. As the horse doubtless experiences a certain pleasure from this handling, he will soon become gentle under it, and show very marked attachment to his keeper.

THE KIND OF BIT TO USE AND HOW TO USE IT.

To accustom a colt to the bit, you should use a large, smooth snaffle, so as not to hurt his mouth, with a bar at each side to prevent it from pulling through either way. This should be attached to the headstall of your bridle, and put it on your colt without any reins to it, and let him run loose in a large stable or shed, some time, until he becomes a little used to the bit, and will bear it without trying to get it out of his mouth. Repeat this several times, before you do anything more with the colt; and as soon as he will bear the bit, attach a single rein to it, without any martingale. You should also have a halter on your colt, or a bridle made after the fashion of a halter, with a strap to it, so that you can hold or lead him about without pulling much on the bit.

Farmers often put bitting harness on a colt the first thing they do to him, buckling it on as tight as they can draw it, to make him carry his head high, and then turn him out in a lot, to run half a day at a time. This is one of the very worst punishments they can inflict on a colt, and is very injurious to a young horse that has been used to running in pasture with his head down. I have seen colts so injured in this way that they never got over it.

A horse should be well accustomed to the bit before you put on the bitting harness, and when you first bit him you should only rein his head up to the point where he naturally holds it, let that point be high or low; he will soon learn that he cannot lower his head, and that raising it a little will loosen the bit in his mouth. This will give him an idea of raising his head to loosen the bit; and then you can draw the bitting a little tighter every time you put it on, and he will still raise his head to loosen it. By this means you will gradually get his head and neck in the position you want him to carry it, and give him a nice and graceful carriage without hurting him, making him mad, or causing his mouth to get sore. Horses that have their heads drawn up

tightly, should not have the bitting on more than fifteen minutes at a time.

HOW TO MAKE A BITTING BRIDLE FOR AN UNRULY HORSE

Take the Eureka Bridle, already described, and fix a loop upon the other end, just like that already used to put around the jaw, but big enough to go over the head and fit over the neck, rather tight, where the collar is worn. Now bring your cord forward, put through the mouth from the off side, and bring back on the near side and put through the loop around the neck. Pull upon this cord, and the head will be drawn back to the breast. You are now prepared to bit. Simply pull upon the cord a little, which will draw the head back slightly; after holding for a short time, render loose; then draw a little tighter, and so repeat for four or five minutes. Then stop bitting and repeat at some future time till you have the horse entirely under your control.

HOW TO SADDLE A COLT.

Any one man who has this theory, can put a saddle on the wildest horse that ever grew, without any help, and without scaring him. The first thing will be to tie each stirrup strap into a loose knot, to make them short and prevent the stirrups from flying about and hitting him. Then double up the skirts and take the saddle in your right arm, so as not to frighten him with it when you approach. When you get to him, rub him gently a few times with your hand, then raise the saddle very slowly, until he can see it, and smell, and feel it with his nose. Then let the skirts loose, and rub it very gently against his neck the way the hair lays, letting him hear the rattle of the skirts as he feels them against him; each time a little further backward, and finally slip it over on his back. Shake it a little with your hand, and in less than five minutes you can rattle it about over his back as you please, and pull it off and throw it on again, without his paying much attention to it.

As soon as you have accustomed him to the saddle, fasten the girth. Be careful how you do this. It often frightens the colt when he feels the girth binding him, and making the saddle fit tight on his back. You should bring up the girth very gently, and not draw it too tight at first, just enough to hold the saddle on. Move him a little, and then girth it as tight as you choose, and he will not mind it.

You should see that the pad of your saddle is all right before you put it on, and that there is nothing to make it hurt him, or feel unpleasant to his back. It should not have any

loose straps on the back part of it, to flap about and scare him. After you have saddled him in this way, take a switch in your right hand to tap him up with, and walk about in the stable a few times with your right arm over your saddle, taking hold of the reins on each side of his neck with your right and left hands, thus marching him about in the stable until you teach him the use of the bridle and can turn him about in any direction, and stop him by a gentle pull of the rein. Always caress him, and loose the reins a little every time you stop him.

You should always be alone, and have your colt in some light stable or shed the first time you ride him; the loft should be high so that you can sit on his back without endangering your head. You can teach him more in two hours' time in a stable of this kind, than you could in two weeks in the common way of breaking colts, out in an open place. If you follow my course of treatment, you need not run any risk, or have any trouble in riding the worst kind of horse. You take him a step at a time, until you get up a mutual confidence and trust between yourself and horse. First teach him to lead and stand hitched; next acquaint him with the saddle, and the use of the bit; and then all that remains is to get on him without scaring him, and you can ride him as well as any horse.

HOW TO MOUNT A COLT.

First gentle him well on both sides, about the saddle and all over, until he will stand still without holding, and is not afraid to see you anywhere about him. As soon as you have him well gentled, get a small block about one foot or eighteen inches in height, and set it down by the side of him, about where you want to stand and mount him; step up on this, raising yourself very gently. Horses notice every change of position very closely, and if you were to step up suddenly on the block, it would be very apt to scare him; but by raising yourself gradually on it, he will see you without being frightened, in a position very near the same as when you are on his back. As soon as he will bear this without alarm, untie the stirrup strap next to you, and put your left foot in the stirrup, and stand square over it, holding your knee against the horse, and your toe out, so as to touch him under the fore-shoulder with the toe of your boot. Place your right hand on the front of the saddle, and on the opposite side of you, taking hold of a portion of the mane and reins (they hang loosely over his neck), with your left hand, then gradually bear your weight on the stirrup and

on your right hand, until the horse feels your whole weight on the stirrup; repeat this several times, each time raising yourself a little higher from the block, until he will allow you to raise your leg over his croup, and place yourself in the saddle. Another, and in some cases a better way of mounting, is to press the palm of your right hand on the off-side of the saddle, and as you rise lean your weight on it. By this means you can mount with the girths loose, or without any girths at all.

There are three great advantages in having a block to mount from. First, a sudden change of position is very apt to frighten a young horse that has never been handled; he will allow you to walk to him, and stand by his side without scaring at you, because you have gentled him to that position; but if you get down on your hands and knees and crawl towards him, he will be very much frightened: and upon the same principle, he would frighten at your new position if you had the power to hold yourself over his back without touching him. Then the first great advantage of the block is to gradually gentle him to that new position in which he will see you when you ride him. Secondly, by the process of holding your weight in the stirrups, and on your hand, you can gradually accustom him to your weight, so as not to frighten him by having him feel it all at once. And, in the third place, the block elevates you so that you will not have to make a spring in order to get on the horse's back, but from it you can gradually raise yourself into the saddle. When you take these precautions, there is no horse so wild but that you can mount him without making him jump. I have tried it on the worst horses that could be found, and have never failed in any case. When mounting, your horse should always stand without being held. A horse is never well broke when he has to be held with a tight rein when mounting; and a colt is never so safe to mount as when you see that assurance of confidence, and absence of fear, which cause him to stand without holding.

HOW TO RIDE A COLT.

When you want a colt to start, do not touch him on the side with your heel, or do anything to frighten and make him jump. At once speak to him kindly, and if he does not start, pull him a little to the left until he does so, then let him walk off slowly with the reins loose. Walk him around in the stable a few times until he gets used to the bit, you can turn him about in every direction and stop him as you please. It will be well to get on and off a good many times

until he gets perfectly used to it before you take him out of the stable. After you have trained him in this way, which should not take more than two or three hours, you can ride him anywhere you choose without ever having him jump or make an effort to throw you.

When you first take him out of the stable, be very gentle with him, as he will feel a little more at liberty to jump or run, and be easier frightened than he was while in the stable; but you will nevertheless find him pretty well broke, and will be able to manage him without trouble or danger.

When you first mount a colt, take a little the shortest hold on the left rein, so that if anything frightens him, you can prevent him from jumping by pulling his head around to you. This operation of pulling a horse's head round against his side, will prevent him from jumping ahead, rearing up, or running away. If he is stubborn and will not go, you can make him move by pulling his head around to one side, when whipping him would have no effect. Turning him around a few times will make him dizzy, and then by letting him have his head straight, and giving him a little touch with the whip, he will go along without any trouble.

Never use martingales on a colt when you first ride him; every movement of the hand should go right to the bit in the direction in which it is applied to the reins, without a martingale to change the direction of the force applied. You can guide the colt much better without it, and teach him the use of the bit in much less time. Besides, martingales would prevent you from pulling his head round if he should try to jump.

After your colt has been ridden until he is gentle and well accustomed to the bit, you may find it an advantage, if he carries his head too high or his nose too far out, to put martingales on him.

You should be careful not to ride your colt so far at first as to heat, worry, or tire him. Get off as soon as you see he is a little fatigued; gentle him and let him rest; this will make him kind to you, and prevent him getting stubborn or mad.

FOOT STRAP, AND HOW TO USE IT.

Take a common strap or rope about the size of the Eureka Bridle. The Eureka bridle will do by untying one of the loops. Fasten the end untied carefully to the forward foot, below the fetlock. Pass the other end over the bellyband of the harness, and carry it back on the left side to the sulky over the hold-back strap of the breechen, and hold as a third rein in your hand. You have in this strap or cord, connect-

ed with the foot in this way, a means of control, with which you can almost as easily as if a plaything, control a horse while moving in the harness, and embodies one of the most valuable and effective means of controling a horse in harness yet demonstrated. If the horse attempts to run away, simply pulling upon your strap throws him instantly upon three legs, and he has to stop. If he attempt to run back, the same remedy stops him. If he attempts to kick, you attract his attention forward instantly, and at the same time make it impossible for him to kick.

HOW TO PREVENT A HORSE RUNNING AWAY.

Put on the foot strap, and when he attempts to run take up his foot, make him run, and tripping every time he will not stop instantly at the word "Whoa." Should he be of the extremely willful character, he may run on three legs. If you mistrust so, attach another strap to the opposite foot. Then make him run, and if he will not run for the taking up the second, which will destroy his confidence at once, when one strap will answer just as well. Make your lesson thorough, so that the horse will stop every time you call "whoa."

Although we have given a powerful means of coertion and of impressing the horse of his inability to resist the will of man, still practical and thorough as are those means, they are but of little account if not used with prudence and judgment.

HOW TO MAKE A HORSE LIE DOWN.

Everything we want to teach the horse must be commenced in such way as to give him an idea of what we want him to do, and then be repeated till he learns it perfectly. To make a horse lie down, bend his left fore-leg and slip a loop over it, so that he cannot let it down. Then put a surcingle around his body, and fasten one end of a long strap around the other fore-leg, just above the hoof. Place the other end under the before-described surcingle, so as to keep the strap in the right direction; take a short hold of it with your right hand; stand on the left side of the horse; grasp the bit in your left hand, pull steadily on the strap with your right; bear against his shoulder till you cause him to move. As soon as he lifts his weight, your pulling will raise the other foot, and he will have to come on his knees. Keep the strap tight in your hand, so that he cannot straighten his leg if he rises up. Hold him in this position, and turn his head towards you; bear against his side with your shoulder, not

hard, but with a steady, equal pressure, and in about ten minutes he will lie down. As soon as he lies down, he will be completely conquered, and you can handle him as you please. Take off the straps, and straighten out his legs; rub him lightly about the face and neck with your hand the way the hair lies; handle all his legs, and after he has lain ten or twenty minutes, let him get up again. After resting him a short time, make him lie down as before. Repeat the operation three or four times, which will be sufficient for one lesson. Give him two lessons a day, and when you have given him four lessons, he will lie down by taking hold of one foot. As soon as he is well broken to lie down in this way, tap him on the opposite leg with a stick when you take hold of his foot, and in a few days he will lie down from the mere motion of the stick.

KICKING IN STALL.

To cure a horse of this habit put on the saddle part of a carriage harness, and buckle on tightly. Then take a short strap, with a ring attached, and buckle around the forward foot below the fetlock. To this short strap attach another strap, which bring up and pass through the turret; then return to the foot and run through the ring in the short strap. Then pass over the bellyband and tie to the hind leg, below the fetlock. With this attachment on each side, the moment the horse kicks he pulls his feet from under and trips himself upon his knees, which he will be very careful not to do but a few times.

HOW TO TAME A HORSE WITH VICIOUS HABITS.

Having given full instructions relative to system of dealing with young colts, I will now proceed to detail the plan of operations for taming and subduing wild or vicious horses. The principles of this method are the same as those in management of colts—kindness and gentleness—but the practice differs. When you desire to subdue a horse that is very wild, or has a vicious disposition, take up one fore-foot and bend his knee till his hoof is bottom upwards, and nearly touching his body; then slip a loop over his knee, and shove it up until it comes above the pastern-joint, to keep it up, being careful to draw the loop together between the hoof and pastern-joint with a second strap of some kind to prevent the loop from slipping down and coming off. This will leave the horse standing on three legs; you can now handle him as you wish, for it is utterly impossible

for him to kick in this position. There is something in this operation of taking up one foot, that conquers a horse quicker and better than anything else you can do to him: and there is no process in the world equal to it to break a kicking horse, for by conquering one member, you conquer, to a great extent, the whole horse.

You can do anything you wish with the horse in this condition, as when he becomes convinced of his incapacity to cope with man, he will abandon all antagonistic demonstrations, and become willing to obey, and be generally docile. Operate on your horse in this manner as often as the occasion requires, and you will soon find him as gentle as his nature will permit him to be. By these means the most vicious, uneasy, unruly or fretful horse may be cured, though it depends upon the age and disposition of the animal how long it will take to make him amiable. When you first fasten up a horse's foot, he will sometimes get very mad, and strike with his knee, and try every possible way to get it down; but as he cannot do that, he will soon give up.

Conquering a horse in this manner is better than anything else you could do, and leaves him without any posssible danger of hurting himself or you either; for after you have tied up his foot, you can sit down and look at him until he gives up. When you find he is conquered, go to him, let down his foot, rub his leg with your hand, caress him, and let him rest a few minutes; then put it up again. Repeat this a few times, always putting up the same foot, and he will soon learn to travel on three legs, so that you can drive him some distance. As soon as he gets a little used to this way of traveling, put on your harness and hitch him to a sulky. If he is the worst kicking horse that ever raised a foot, you need not be fearful of his doing any damage while he has one foot up; for he cannot kick, neither can he run fast enough to do any harm. And if he is the wildest horse that ever had harness on, and has run away every time he has been harnessed, you can now hitch him to a sulky and drive him as you please. If he wants to run, you can let him have the lines, and the whip too, with perfect safety; for he can go but a slow gait on three legs, and will soon be tired and ready to stop; only hold him enough to guide him in the right direction, and he will soon be tired and willing to stop at the word. Thus you will effectually cure him at once of any further notion of running off.

Kicking horses have always been the dread of everybody; you always hear men say, when they speak about a bad horse, "I don't care what he does, so he don't kick." This

new mode is an effectual cure for that worst of all habits. There are plenty of ways by which you can hitch a kicking horse, and force him to go, though he kicks all the time; but this does not have any good effect towards breaking him, for we know that horses kick because they are afraid of what is behind them, and when they kick against it and it hurts them, they only kick the harder; and this will hurt them still more and make them remember the scrape much longer, and make it still more difficult to persuade them to have any confidence in anything dragging behind them ever after. But by this new method you can harness them to a rattling sulky, plow, wagon, or anything else in its worst shape. They may be frightened at first, but cannot kick or do anything to hurt themselves, and will soon find that you do not intend to hurt them, and then they will not care anything more about it. You can then let down the leg and drive along gently without any further trouble. By this new process a bad kicking horse can be learned to go gentle in harness in a few hours' time.

HOW TO CURE BAD KICKERS.

For extremely bad kickers or horses bad to shoe, the following method will be found the most effectual. Put on a common rope or strap halter, with a hitching rope or strap about twice as long as the animal's body. Have around the body a common rope or surcingle. Then pass this rope or strap between the fore-legs over the surcingle, back around the hind feet, below the fetlocks, and forward over the surcingle between the legs, and tie short into the halter beneath the jaws. Now make the horse kick and you will find that he reproves himself in the most severe manner, and in a short time will submit unconditionally. Care should be taken against chafing the foot by the action of the strap or rope around the fetlocks. If you can attach a little strap around each foot with rings in them, through which run the strap or rope from the head instead of around the feet, horses extremely bad to kick when handled about the feet, or to be shod, yield readily to this mode of treatment. Always after a horse has submitted he should be caressed and treated in a kind and gentle manner. For driving in harness, attach to a common halter-head-stall a strap about six feet long, over which put a two inch ring, then tie the end of this strap back into the halter. Now pass this double strap down between the fore-legs, so that the ring will extend just back of the belly-band, then buckle around each hind foot below the fetlocks short straps with ring attached, to these rings attach a

rope, which is passed through the ring upon the halter, just enough to enable the horse to stand naturally. In this condition it will be seen the horse has sufficient freedom to walk and trot, but the moment he attempts to kick, he reproves himself by the attachment to the head.

HOW TO HITCH A HORSE IN A SULKY.

Lead the horse to and around the sulky; let him look at it, touch it with his nose, and stand by it until he does not care for it; then pull the shafts a little to the left, and stand your horse in front of the off wheel. Let some one stand on the right side of the horse and hold him by the bit, while you stand on the left side facing the sulky. This will keep him straight. Run your left hand back and let it rest on his hip, and lay hold on the shafts with your right, bringing them up very gently to the left hand, which still remains stationary. Do not let anything but your arm touch his back, and as soon as you have the shafts square over him, let the person on the opposite side take hold of one of them, and lower them very gently to the shaft bearers. Be very slow and deliberate about hitching; the longer time you take the better, as a general thing. When you have the shafts placed, shake them slightly, so that he will feel them against each side. As soon as he will bear them without scaring, fasten your braces, etc., and start him along very slowly. Let one man lead the horse to keep him gentle, while the other gradually works back with the lines till he can get behind and drive him. After you have driven him in this way a short distance, you can get into the sulky, and all will go right. It is very important to have your horse go gently when you first hitch him. After you have walked him awhile, there is not half so much danger of his scaring. Men do very wrong to jump up behind a horse to drive him as soon as they have him hitched. There are too many things for him to comprehend all at once. The shafts, the lines, the harness, and the rattling of the sulky, all tend to scare him, and he must be made familiar with them by degrees. If your horse is very wild, I would advise you to put up one foot the first time you drive him.

HOW TO TRAIN HORSES FOR THE CHAISE.

It will not require a very vivid imagination for those that use the chaise much to know that there is a great difference in the motion of the chaise; and what makes the difference? It is the gait of the horses; and those who would purchase a good chaise horse must look for a short gaited one. A long

gaited horse gives an unpleasant motion to the chaise. Now, all horses of good action will make a good chaise horse if you shorten their gait. To do this, you must use a net. This net like a breast collar; it must be two feet or two and a half must now be fastened to the collar and harness, and worn long, reaching to the knees; the cords in the fringe to this must be about four inches apart, and on each cord there must be four balls of one inch and a half in diameter.

There must be a similar net on the breaching, reaching around the flank and meeting the front one; this net must hang below the gambrils; then use a string of smaller balls on the fore feet, these to be one inch in diameter. They will effectually shorten the gait. You should be careful in the first exercise after the putting on of the net. Drive or lead the horse around, after the harness and net are on, before putting him to the chaise. After a short time, he can be hitched in and driven, but not fast, until his gait is confirmed. After a few days practice, you will have a fine chaise horse. Some of the best chaise horses have become so from having sore feet, which made them step short. If you will attend to the remarks on shoeing, and take care of the foot otherwise, your horses will never have contracted feet.

TO TRAIN A HORSE TO STAND WHEN YOU ARE GETTING INTO A CARRIAGE.

There are many horses that are very gentle after starting, but who will not stand to let more than one get in; they will then rear up and start very suddenly, and, if stopped, they become stubborn, and refuse to start when called on. People then usually punish them with the whip, or by kicking them, sometimes in the belly, which is very dangerous, as they have thus been ruptured. Now, with such a horse as this, you should commence in this way:—after he is hitched, caress him about the head, then take hold of the reins, and put your foot upon the step, and shake the carriage; if he starts, pull gradually on the reins, and, at the same time, speak low, "Whoa, my boy!" or something like it. Then approach his head, and give him a piece of apple caress him on the head, between the eyes, and on the nose and neck; continue this kind treatment a few minutes, and when you get in dont you allow him to start off in a hurry—walk him off. After a few repetitions of this exercise he will be perfectly submissive.

HALTER PULLING.

It is a very easy matter to break up this bad habit. Put on the Eureka Bridle, and train the horse about until he

will come to you readily when you pull upon him a little sideways. Simply repeat this, gradually a little more on a line with his body at each repetition, until he will yield as readily at being pulled forward as sideways. Then tie a strap, or a piece of rope around the body where the harness saddle rests. Now lead the horse to his manger or to a post, run the halter strap through the ring or hole and pass back between the fore-legs over the strap or cord tied around the body, and tie to the hind leg below the fetlock. If your halter strap is not long enough, splice a piece to it. Your horse so fastened step forward to his head and make him pull. Of course he will go back with a rush, but the moment he attempts going back, the halter strap pulls directly upon the hind leg, which not only disconcerts, but makes it impossible for him to pull. The most halter pullers will not pull two or three times when so hitched, but success in this, as well as all other cases depends much on the prudence and good judgment used in managing the case.

HOW TO MANAGE BALKY HORSES.

Horses know nothing about balking until they are forced into it by bad management. When a horse balks in harness, it is generally from some mismanagement, excitement, confusion, or from not knowing how to pull, but seldom from any unwillingness to perform all that he understands. High-spirited free-gofng horses are the most subject to balking, and only so because drivers do not properly understand how to manage this kind. A free horse in a team may be so anxious to go, that when he hears the word he will start with a jump, which will not move the load, but give him so severe a jerk on the shoulders that he will fly back and stop the other horse. The teamster will continue his driving without any cessation, and by the time he has the slow horse started again, he will find that the free horse has made another jump, and again flown back. And now he has them badly balked, and so confused, that neither of them knows what is the matter, or how to start the load. Next will come the slashing and cracking of the whip, and hallooing of the driver, till something is broken, or he is through with his course of treatment. But what a mistake the driver commits by whipping his horse for this act! Reason and common sense should teach him that the horse was willing and anxious to go, but did not know how to start the load. And should he whip him for that? If so, he should whip again for not knowing how to talk. A man

that wants to act with reason should not fly into a passion, but should always think before he strikes. It takes a steady pressure against the collar to move a load, and you cannot expect him to act with a steady, determined purpose while you are whipping him. There is hardly one balking horse in five hundred that will pull truly from whipping; it is only adding fuel to fire, and will make him more liable to balk another time. You always see horses that have been balked a few times, turn their heads and look back as soon as they are a little frustrated. This is because they have been whipped, and are afraid of what is behind them. This is an invariable rule with balky horses, just as much as it is for them to look around at their sides when they have the bots; in either case they are deserving of the same sympathy, and the same kind of rational treatment.

When your horse balks, or is a little excited, or if he wants to start quickly, or looks around and don't want to go, there is something wrong, and he needs kind treatment immediately. Caress him kindly, and if he don't understand at once what you want him to do, he will not be so much excited as to jump and break things, and do everything wrong through fear. As long as you are calm, and can keep down excitement of the horse, there are ten chances to have him understand you, where there would not be one under harsh treatment; and then the little *flare up* would not carry with it any unfavorable recollections, and he would soon forget all about it, and learn to pull true. Almost every wrong act the horse commits is from mismanagement, fear or excitement; *one harsh word will so excite a nervous horse as to increase his pulse ten beats in a minute.*

Almost any team, when first balked, will start kindly if you let them stand five or ten minutes, as though there was nothing wrong, and then speak to them with a steady voice, and turn them a little to the right or left so as to get them both in motion before they feel the pinch of the load. But if you want to start along a team that you are not driving yourself, that has been balked, fooled, and whipped for some time, go to them and hang the lines on their hames, or fasten them to the wagon, so that they will be perfectly loose; make the driver and spectators, if there are any, stand off some distance to one side, so as not to attract the attention of the horses; unloose their check reins, so that they can get their heads down if they choose; let them stand a few minutes in this condition, until you can see that they are a little composed. While they are standing you should be about their heads gentling them; it will make them a little more kind, and the

spectators will think you are doing something that they do not understand, and will not learn the secret. When you have them ready to start, stand before them, and as you seldom have but one balky horse in a team, get as near in front of him as you can, and if he is too fast for the other horse, let his nose come against your breast; this will keep him steady, for he will go slow rather than run on you; turn them gently to the right, with the wagon; have it stand in a favorable position for starting out, letting them pull on the traces as far as the tongue will let them go; stop them with a kind word, gentle them a little, and turn them back to the left, by the same process. You will have them under your control by this time, and as you turn them again to the right, steady them in the collar, and you can take them where you please.

There is a quicker process that will generally start a balky horse, but not so sure. Stand him a little ahead, so that his shoulder will be against the collar, and then take up one of his fore-feet in your hand, and let the driver start them, and he will go right along. If you want to break a horse from balking that has long been in that habit, you ought to set a day apart for that purpose. Put him by the side of some steady horse; have check lines on them; tie up all the traces and straps, so that there will be nothing to excite them; do not rein them up, but let them have their heads loose. Walk them about together as slowly and lazily as possible; stop often and go up to the balky horse and gentle him, but keep him just as quiet as you can. He will soon learn to start off at the word, and stop whenever you tell him.

As soon as he performs right, hitch him to an empty wagon. It would be well to shorten the stay chain behind the steady horse, so that if it is necessary he can take the weight of the wagon the first time you start them. Do not drive but a few rods at first; watch your balky horse closely, and if you see that he is getting excited, stop him before he stops of his own accord, caress him a little, and start again. As soon as they go well, drive them over a small hill a few times, and then over a large one, occasionally adding a little load. This process will make any horse true to pull.

ADVICE TO THOSE WHO HIRE HORSES.

It will be for your interest, reader, to use all precautions to prevent a horse from becoming sick while in your hands. This can be done by adhering to certain rules which I will now note down.

When you leave the stable drive slow for a few miles un-

less you know how much the horse has been fed. If he has just finished his meal it is very necessary that he should be driven at a moderate pace on the start. If he had eaten a few hours before, this precaution will be unnecessary. When you water your horse never give over two quarts, and that once in three hours. Look at his mouth—if it is moist with saliva, he does not need watering. If the mouth is dry and if tepid water is at hand, wash out the nostrils and mouth with it, if no tepid water is at hand use cold, but warm water would cause the saliva to exude, relieving the horse by keeping the mouth moist afterwards.

If you are on a journey stop at 11 A. M. and let your horse stand without any food for a half or one whole hour, then give about one gallon of water, and let him stand ten minutes when he may be given three quarts of oats, or five ears of good bright corn, or three pints of shelled corn. Let him stand after eating, two or three hours, if you can; then you may put him on a brisk trot, without any danger of causing disease. I should rather have a horse driven seven miles an hour, treated in this way, than four, if started off directly after eating. By watering after feeding, and then driving off, gases are generated on the stomach, and give colic, or set the botts to work in the membrane of the stomach.

Again, if the horse is warm when you stop, be careful not to stand him in a current of air; he might take a disease in ten minutes that would carry him off; if in very warm weather, he had better stand in the sun than in a draught of air. If in very cold weather, either stable him or clothe him when you stop, to keep the cold air from closing the pores of the skin. If you are compelled to stop in the wind, always face the wind, then the air blows the way the hair lays. If in the winter in a northern climate, never allow a snow-ball to remain in the foot, especially if he has been driven fast and is warm. The coffin muscle is relaxed by heat, and the close proximity of snow would cool off the foot so suddenly that the muscle would contract, and in a few days the hoof would shrink to the contraction and make him lame.

Always be cautious to keep the feet from cold water when the horse is warm, and any sudden contact of cold with hot blood, either in the body or legs, would be dangerous. These precautions should be taken either in riding or driving. If you drive through water when the horse is warm, give exercise enough to keep up the circulation, not to allow the blood to be chilled in the veins. If you adhere to these rules, you will not be likely to have a horse injured by your management.

ON CHOKING AS A MEANS OF SUBDUING A HORSE.

Choking is another method of conquering a skittish, stubborn or refractory horse. It is resorted to in cases where the measures before described fail to produce the desired effect. The principles on which the plan of choking are based, are, that you must make a powerful appeal to the intelligence of the animal by physical means before you can subdue him. Now we must know that most animals, in fighting, seize each other by the throat, and that a dog thus held by his antagonist for a few minutes, on being released, is often so thoroughly cowed that no human artifice can induce him to again resume the unequal contest. It is, then, reasonable to suppose that choking will have a similar effect on the horse. When it can be done without injuring the animal, it is an easy mode of subduing him, for by its operation he becomes docile, and will thereafter receives any instruction which he can be made to understook. Teaching the horse, by this means, to lie down at our bidding, tends to keep him permanently gentle towards man, for it is a perpetual reminder of his subdued condition.

It requires a deal of practice to tame a horse successfully by choking; also a nice judgment to know when he is choked sufficiently, as there is a bare possibility that he might get more than would be good for him. We advise persons not perfectly familiar with a horse to resort rather to the strapping and throwing-down process, unless the animal to be operated upon is so vicious and intractable that he cannot be cured by it.

TO MAKE HORSES PERFECTLY SAFE FOR FAMILY USE.

For a family horse, we should select one with a full, prominent eye, and a broad space between them, full forehead, ears straight and pointed; when in action the ear should be in motion, working back and forth, thus showing that he knows what is transpiring around him. He should have a long, thin neck, and a full trumpet nostril. A horse of these points is not apt to tire on the road, for they indicate good blood.

By giving the animal to understand that we are his friend and protector, he will feel that he is safe and have confidence in us. To assure him of this we must caress him on the head and neck, and talk softly to him; then if you have something he is very fond of—by feeding him with it we gain his sympathy and confidence, and he will remember us and our kindness to him. To us this is most reasonable. So long as he

is treated kindly he will be kind and gentle himself to every one handling him. If he should frighten at any new object, by speaking gently, "So ho, my boy!" several times over, it assures him at once that he is safe. When your horses are harnessed to the carriage, and they wish to start before you are ready, do not jerk them, or speak cross, but go to their heads, and caress and soothe them, and, when you get in, draw the reins up carefully, and talk kindly to them, and allow them to walk off slowly; in a few days, with such treatment, your horses will be perfectly tractable and gentle. A full blooded horse is as sensitive as a well-bred man, and you must not hilloa to him as you might to a hog. This you may not believe, but it is so. You must never use the whip, except when the horse knows what and how to do, and will not do it, or is lazy, and requires the lash to increase the speed. Adhere to the principle of kindness, and you will not fail to have a well trained family horse.

ON THE REARING OF COLTS.

If a fine colt is desired we must breed to a fine horse thorough blooded.

The colt should not be allowed to shrink for two years at least.

If the dam has not sufficient milk to keep him plump, he must be fed on cow's milk. Feed him through the winter on oatmeal dry and give him cow's milk to drink. If a colt is allowed to shrink during the first two years, he will never fill out again as full and plump—his fine points will be undeveloped.

The colt should not be kept close to a stable, but allowed to run in and out at pleasure. He should not be allowed to stand on a plank floor at all. In the spring as soon as the grass is good he should be turned out to pasture.

ON THE TRAINING OF HORSES FOR TROTTING.

The horse should be in good flesh. He should be driven moderately, with walking exercise every morning of about five miles. Before going into quarters, give him a brush, for one hundred yards, at the top of his speed, and one or two miles of moderate driving, sufficient to sweat him; then rub dry with rubbing rags, light rubbing is the best, just enough to dry the hair. Hard rubbing on the bones or cords causes soreness. Rub the flesh and muscles well to harden them. When driving to sweat, put on two thick woolen blankets, and drive at full speed two miles. Then turn down the hood, or neck cover, and scrape the head and neck well, and rub

dry; then cover dry, and continue the same over the whole body, rubbing lightly and only enough to dry the hair. Then put on nice dry covering, and let him stand. Sweating often in this way will weaken; it should be done but seldom.

Their food and drink should be of the purest kind; sift their oats free from all dust, and dust their hay, too. Give about a handful at a feed, morning and noon, and about twice that at night. From twelve to sixteen quarts of oats would be a great plenty per day—twelve would be plenty for the majority. Give one gallon of water in the morning. The same at noon. At night, give two gallons of water, and a peck of oats, with treble the quantity of hay. You should not exercise any horse on a full stomach, for then fast work hinders digestion. Grain, lying undigested in the stomach, generates a gas by fermentation, which sets the bots at work, and gives colic. Indigestion is the cause of many diseases, and can be avoided by adhering to the directions for feeding, watering and driving, given in the first part of this book. If he is bound up, and you wish to physic, give bran mashes.

ON HORSE BLINDS OR BLINKERS.

All my experience with and observation of horses, proves clearly to me that blinkers should never be used, and that the sight of the horse, for many reasons, should not be interfered with in any way. Horses are only fearful of objects they do not understand, or are not familiar with, and the eye is one of the principal mediums by which this understanding and this familiarity are brought about. The horse, on account of his very amiable nature, can be made in the course of time to bear almost anything in any shape; but there is a quicker process of reaching his intelligence than that of wearing it into him through his skin and bones. However wild or nervous a horse may be, he can be taught in a very short time to understand and not to fear any object, however frightful in appearance. Horses can be broken in less time, and better without blinkers; but horses that have always worn them will notice the sudden change, and must be treated carefully the first drive. After that they will drive better without the blinkers than with. I have proved by my own experiments that a horse broken without blinkers can be driven past any omnibus, cab or carriage, on a parallel line as close as it is possible for him to go, without ever wavering or showing any disposition to dodge. I have not in the last eight or ten years, constantly handling horses, both wild and nervous, ever put blinkers on any of

them, and in no case have they ever shied at passing objects.

The horse's eye is the life and beauty of the animal, as well as the index of his emotions. It tells the driver, in the most impressive characters, what the horse's feelings are. By it he can tell the first approach of fear in time to meet any difficulty; he can tell if he is happy or sad, hungry or weary. The horse, too, when permitted to see, uses his eyes with great judgment. He sees better than we do. He can measure distances with his eyes better than we can, and if allowed free use of them, would often save himself, by the quickness of his sight, from collisions when the driver would fail to do so by a timely pull of the reins. It would also save many accidents to pedestrians in the streets, as no horse will run to any person that he can see. Blinkers are rapidly going out of use in the United States, and I have yet to find the man who, having once left them off, could be persuaded to put them on again. They are an unnecessary and injurious incumbrance to the horse, and in years hence will be a thing to be read of as one of the follies happily reformed in the nineteenth century.

RULES TO BE OBSERVED IN THE PURCHASE OF A HORSE.

When about to purchase a horse, examine the eyes well. The best judges are sometimes deceived in the eyes, therefore you cannot be too careful. *Clearness of the Eyes* is a sure indication of their goodness; but this is not all that should be attended to: the eyelids, eyebrows, and all the other parts, must also be considered; for many horses whose eyes appear clear and brilliant, go blind at seven or eight years old. Therefore be careful to observe whether the parts between the eyelids and the eyebrows are free from bunches, and whether the parts round the under eyelids be full, or swelled; for these are indications that the eyes will not last. When the eyes are remarkably flat, or sunk within their orbits, it is a bad sign; also when they look dead and lifeless. The *iris*, or circle that surrounds the sight of the eye, should be distinct, and of a pale, variegated, cinnamon color, for this is always a sure sign of a good eye, and it adds beauty to the appearance of the animal.

Next examine the *Teeth*, as you would not wish to purchase an old horse, nor a very young one for service.

The *Feet* should next be regarded; for a horse with bad feet is like a house with a weak foundation, and will do little service. The feet should be smooth and tough, of a middle size, without wrinkles, and neither too hard and brittle, nor

too soft; the *Heels* should be firm, and not spongy and rotten; the *Frogs* horny and dry; the *Soles* somewhat hollow, like the inside of a dish or bowl. Such feet will never disappoint your expectations, and such only should be chosen.

Particular regard should be had to the *Shoulders:* they should not be too much loaded, for a horse with heavy shoulders can never move well; and on the other hand, one that has very thin shoulders, and a narrow chest, though he may move briskly so long as he is sound, yet he is generally weak, and easily lamed in the shoulders; a medium should therefore be chosen.

The *Body*, or *Carcass*, should neither be too small nor too large. The *Back* should be straight, or have only a moderate sinking below the Withers: for when the back of a horse is low, or higher behind than before, it is both very ugly and a sign of weakness. The back should also be a proper length. The *Ribs* should be large, the *Flanks* smooth and full, and the *Hind-parts*, or, *uppermost Haunches* not higher than the shoulders. When the horse trots before you, observe if his haunches cover his fore-knees. A horse with a short hind-quarter does not look well.

The next thing to be regarded in a horse is his *Wind*, which may be easily judged of by the motion of his flanks. A broken-winded horse also pinches in his flanks, with a very slow motion, and drops them suddenly, which may be easily perceived. Many horses breathe thick that are not broken-winded, indeed, any horse will in foggy weather, or if foul fed, without sufficient exercise; but if a horse has been in good-keeping, and had proper exercise, and yet has these symptoms, there is some defect either natural or accidental; such as a narrow chest, or some cold that has affected the lungs.

There are other particulars that should be observed in choosing a horse. If his *Head* be large and fleshy, and his *Neck* thick and gross, he will always go heavy on the hand, and therefore such should never be chosen. A horse that has his *Hocks* very wide, seldom moves well, and one that has them too near will chafe and cut his legs by crossing them. *Fleshy-legged* horses are generally subject to the Grease, and other infirmities of that kind, and therefore should not be chosen.

The *Temper* of a horse should be particularly attended to. Avoid a fearful horse, which you may know at first sight by his starting, crouching, or creeping, if you approach him. A hot and fretful horse is also to be avoided, but the buyer should be careful to distinguish between a hot, fretful horse,

and one that is eager and craving. The former begins to fret the moment he is out of the stable, and continues in that humor till he has quite fatigued himself; and the latter only endeavors to be foremost in the field, and is truly valuable; he has those qualities that resemble prudence and courage; the other those of intemperate heat and rashness.

A horse that goes with his fore-feet low is very apt to stumble; and there are some that go so near the ground that they stumble most on even roads; and the dealers, to remedy this, put heavy shoes on their feet, for the heavier a horse's shoes are, the higher he will lift his feet. Care also should be taken that the horse does not cut one leg with the other. A horse that goes near the ground will cut the low side of the fetlock joint, but one that goes high cuts below the knee which is called the *speedy cut*. A horse that lifts his feet high generally trots fast, but is not the easiest for the rider. Some horses cut with the spurn of the foot, and some with the heel; but this you may soon perceive by their standing; for if a horse points the front of his foot inward, he cuts with the spurn, and if outward, with the heel.

These few instructions may be of use in purchasing horses; but I advise every one to get some experimental knowledge of them before he trusts to his own judgment, for the dealers have so many arts to hide the defects of their horses, that the best judges are often very much deceived.

HOW TO TELL A HORSE'S AGE BY HIS TEETH.

The only sure way of telling the age of a horse, is by the teeth, and these only for certain time; after which time there is nothing to depend on, although you can guess very near, by the front teeth of his upper jaw, until he is about twelve or thirteen; this, with the face of the horse, and some other marks, enables one experienced in horses to guess pretty correctly.

There are six teeth above, and six below, in the fore part of the horse's mouth, from which we may judge of his age, they are called gatherers. When a colt is foaled, he has no teeth in the front of his mouth. In a few days two come in the upper jaw, and two below. Again, in a few days, four more appear; but the corner teeth do not come for several months—three or four. These twelve teeth remain unchanged in the front of the colt's mouth, until he is two or two and a half years old, when he begins to change them for permanent ones; although the manner in which he has been fed regulates, in a measure, the time of change.

Until he is in his eighth year, you tell his age by the front

teeth in the lower jaw—so we will only speak of these. At first he sheds the two middle teeth of the six. These are succeeded by two permanent, or horse teeth, of a deeper color, and stronger—and grooved or fluted from top to bottom, with a black cavity in the centre. He is now about three. In the latter part of the fourth year, the teeth on each side of the teeth in the centre undergoes the same process, and he becomes possessed of four horse teeth in the middle, with their natural black marks in the centre, and one colt's tooth only on each side. He next sheds his corner teeth. When he has their successors his mouth is full. He has the black mark now in all the six teeth, and is five years old.

After a horse is seventeen or eighteen, the grinders wear down, and the nippers prevent the grinders from coming together, so that he cannot masticate his food as well as a six year old horse.

WEIGHTS TO BE CARRIED IN TROTTING.

Weights to be carried by every trotting horse starting for a match, purse, or stake:

Every horse shall carry one hundred and forty-six pounds; if in harness, the weight of the sulky and harness not to be considered. Pacing horses liable to the same rule.

RACE DISTANCES.

A distance of mile heat—best three in five—shall be one hundred yards; for one mile heats eighty yards; and for every additional heat an additional eighty yards.

The time between heats shall be, for one mile twenty, and for every additional mile, five minutes.

TO PUT HORSES IN GOOD CONDITION.

They need good care and clean feed. Do not use condition powders, or such medicines; they are not needed, and are humbugs. If your horse is hide-bound, and out of condition, give him a good purge of linseed oil, or castor oil—one pint. Then give bran mashes morning and evening; he will soon regain his appetite, and will be all right. At any time when your horse loses his appetite, check his food, and give a mash. Give as little medicine as possible. By this treatment you will have healthy horses.

TO KEEP HORSES FREE FROM DISEASE.

The stable must be clean and well ventilated. There is nothing more conducive to good health than pure air and clean food. The ceiling of the stable should be at least ten

or twelve feet high, with a ventilating box at the head four inches square, running out at the roof. The loft should be perfectly tight, so that the breath of the horse cannot rise and mix with the hay, which may be injured both in taste and wholesomeness. It is a bad plan to put hay in a rack; the horse breathes on it and makes it less palatcable and healthy. Feed from a box in front, and but little at a time; he will neither waste it or otherwise injure it. The ventilation in wall of the stable should be as high up as possible so as not to injure him by drafts of air, from which he should always be kept.

Filthy stables cause weak eyes, and a running at the nose, in many instances. The decomposition of vegetable matter, and the urine, give out stimulating and unhealthy vapors, and a strong smell of hartshorn. How can it but cause inflamation of the eyes or lung, or glanders and farcy? Be careful to have your stables so the urine will run off, but don't raise the planking much higher at the front than at the back, for this will cause a strain of the back sinews, and lameness, and thickening up of the same. It is an unnatural way for man or horse to stand.

The horse stalls should have holes bored in the planking, and they should always be kept open. In summer, the horse should always if he stands on a dirt floor stand on straw, or litter of some kind; it relieves the feet in stamping.

It is very injurious to keep horses in a dark stable; it is bad for the eyes, and many horses go blind from this cause. You should likewise avoid a glaring light, or straining white walls. Give a mellow light, with clean stabling, clean food, clean litter, and all will be well.

HOW TO SHOE A HORSE.

If we examine the horse's foot while in his natural state it will be found almost round, and very elastic at the heel. The frog, broad, plump, and of a soft yielding character; the commissares, open and well defined, and the sole concave; the outside of the crust, from the heels to the toe, increased from a slight level to an angle of about forty-five degrees. Consequently as the hoof grows, it becomes wider and larger in proportion to the amount of horn secreted, and the narrower and shorter in proportion to the amount of horn cut away from the ground surface. If a shoe were fitted nicely and accurately to the foot, after being dressed down well, it would be found too narrow and short for the same foot after the lapse of a few weeks. Now, if any unyielding shoe of iron is nailed

firmly to this naturally enlarged and elastic hoof, it prevents its natural freedom of expansion almost wholly, and does not, as the foot grows down, allow it to become wider at the quarters, in proportion to the quantity of horn grown, as before being shod; and consequently the foot changes, from the continued effect of the restraint, from an almost round, healthy foot, to a contracted and unhealthy condition, as generally seen in horses shod for a few years. The principles which should govern in shoeing, are few and simple, and it is surprising that a matter involving such serious consequences, should be conducted with so little consideration. The object of the shoer should be, in trimming and preparing the hoof for the shoe, to keep the foot natural, and this involves:

First.—The cutting away of any undue accumulation of horn affecting in the least its health and freedom.

Second.—To carry out in the form of the shoe, that of the foot as nearly as possible.

Third.—To fit and fasten the shoe to the foot so as to interfere least with its health and elasticity.

The object in preparing the foot for the shoe should be to remove any undue accumulation of horn, designed to prevent its natural bearing, and the free, healthy action of its parts, and requires the cutting away of about the proportion contact with the ground would have worn off or so much as had grown since being shod last. If the shoes had been on a month, then the proportion of horn secreted in the time is to be removed. If on two months, then the proportion of two months growth. No definite rule can be given, the judgment must be governed by the circumstances of the case. The stronger and more rapid the growth of the foot, the more must be cut away; and the weaker and less horn produced, the less, to the extreme of simply leveling the crust a little the better to conform to the shoe. There is generally a far more rapid growth of horn at the toe, than at either the heels or the quarters; more, therefore, will require to be taken off the toe than off the other parts. Therefore shorten the toe and lower the heels until you succeed in bringing down the bearing surface of the hoof, upon the shoe, to almost a level with the live horn of the sole. Be careful to make the heel level.

Having lowered the crust to the necessary extent with the buttress or knife, smooth it down level with the rasp. The sole and frog detach the old horn by exfoliation as it becomes superabundant. The sole, therefore, would not need paring were it not for the restraining effect of the shoe upon the

general functions of the foot, which is liable to prevent such detachment of the horn.

When this is the case, the sole should be properly dressed out with an English shave, the end of which is shaped like an iron used at sawmills to mark and measure boards. The buttress is too large and square edged to dress out so concave a surface properly, and unless great care is exercised it will not only penetrate through the sole in some places, but leave others entirely neglected. While a good workman may work well with almost any kind of tool, such have also the facility of adapting tools to the work. A horse's foot is not to be hacked and cut as if only a block of lifeless wood, and if even a lifeless machine, what care would be found necessary to preserve its harmony of action complete. The buttress does not seem to be at all adapted to dressing out the sole, and should not be used for that purpose. While we are obliged to find fault with the carelessness of blacksmiths in this respect, it is with the spirit of kindness, sensible that we are ourselves only dull pupils in the work of reform, and perhaps deserving severe criticism.

We would be particular also in impressing the necessity of not confounding the bars with the substance of the sole, and cutting them down to the common level with the sole. Any man of common sense can see, that the bearing of the bars should be equal to the outside of the crest upon the shoe, and that they offer a decided resistance to the contraction of the heels. The cutting away of the bars, to give the heels an open appearance, is inexcusable, and should never be done.

In a natural, healthy condition, the frog had a line of bearing with the hoof, and by its elastic nature, acts as a safeguard to the delicate machinery of the foot immediately over it, and helps to preserve the foot in its natural state, by keeping the heels spread. It seems to be wisely intended to give life and health to the foot. Permitting the heels to grow down, with the addition of high heeled shoes, raises the frog from its natural position, and causes it to shrink and harden, and bears in consequence an important influence in setting up a diseased action that usually results in contraction of the foot. If the heels are square and high, and the hoof presents rather a long, narrow appearance, and is hollow on the bottom, there is a state of contraction going on and you must not hesitate to dress down thoroughly. Do not hesitate because the foot will appear small; cut away until you are well down to a level with live horn of the sole, and if the foot is weak, use the same prudence in not cutting

it away too much. The shoer must always bear in mind that the sole must not rest upon the shoe. The sole, when not clogged with old horn, acts as a spring to the weight of the horse, and if it rests upon the shoe, an inflammation may be caused by the pressure of the coffin bone upon the sensitive luminæ, which is liable in consequence to be so bruised as to cause soreness and inflammation. The effect of such bruises are most common at the angle of the inner heel, where the descending heel of the coffin bone, forcibly pressing the soft, sensible sole, upon the horny sole, is apt to rupture one or more of the small blood vessels of the delicate fleshy substance connecting the crust to the coffin bone of the part, causing red spots called corns. Let the foot be so dressed down, and the shoe so approximated, that the bearing will come evenly upon the crust all the way round, without the sole touching the shoe. This requires the crust to be dressed level, and although well down to the live horn of the sole, it should always be left a little higher. The corners between the bars and crust should be well pared out, so that there is no danger of the sole resting upon the shoe.

THE SHOE.

The principal object should be to have the shoe so formed as to size, weight, fitting and fastening, as to combine the most advantages of protection, and preserve the natural tread of the foot the best; in weight it should be proportioned to the work or employment of the horse. If the horse walks principally upon the road, his shoes should be rather heavy. The ground surface of the shoe should correspond with the ground surface of the foot in its natural state, or in other words it must have a concave surface corresponding with the concave surface of the foot. The nail holes should be punched coarse, and in the centre of the web. If the hind shoe, four on the side and well forward; if the forward shoe, four on the outside, and two or three well forward in the inside toe, as found necessary to retain the shoe. The manner of fastening the shoe in what really affects the foot; and which require the most especial attention in shoeing.

INTERFERING SHOES.

First find what part of the foot hits the opposite ankle which you can do by wrapping the ankle with a rag nicely, which color with some kind of coloring matter, over where the opposite foot hits, you can then discover by driving where the color adheres and what portion of the crust hits the ankle. Remove this portion and have the shoe set well under

the foot, but carefully fitted, so as to support the foot safely by the bearing of the bar and heel. The hoof should be pared lower on the outside, to turn the ankle, that the other hoof may pass clear. Yet if the inside sole is not dressed, the rim soon breaks, and the inside is found to be actually lower than the outside. Shoes, to prevent interfering, should be light and of narrow web, on the inside, with three nail holes near the toe. They should be straight at the point where they come in contact with the opposite leg. By adhering strictly to this principle of paring the foot, and fitting and fastening of the shoe, you will prevent a recurrence of the difficulty.

Shoes, to prevent over-reaching, should be long, and for the forward feet, heavy, especially at the heels; and for the hind feet, light, with heavy toes. The hoof should be well pared at the toe.

THE FOOT AND ITS DISEASES.

The crust, or wall, is that part which is seen when the foot is placed upon the ground, and reaches from the hair to the ground. It is deepest in front, where it is called the toe; shallower at the sides, which are called quarters, and of least depth behind where it is termed the heel, it is placed flat upon the ground, but ascends obliquely backward, and possesses different degrees of obliquity in different feet. In a sound hoof, the proper degree of standing is calculated at forty-five degrees, or the fourth part of a semi-circle. This crust is thicker in front, being about half an inch, and at the quarters and heel is very much thinner. It is also thinner at the inner than the outer quarter, where the most weight is thrown upon. It is under the inner splint bone, on which so much weight rests, and being thinner, it is able to expand more—its elasticity is called more into play, and concussion and injury are avoided.

On account of its thinness and the additional weight which it bears, the inner heel wears away quicker than the outer—a circumstance which should never be forgotten by the smith. His object is to give a plain and level bearing to the whole of the crust.

Thus it will be unnecessary to remove but very little, if any, from the inner heel, as it has worn away faster than the outside, from the greater weight it bears, which would cause corns and quarter cracks, and even splints, the concussions being so much greater. This may all be avoided by paying a little attention when shoeing.

THE FROG.

In the place between the bars, and exactly filling it, is the frog. It is a triangular piece of horn projecting from the sole, almost on a level with the crust, and covering and defending a soft and spungy substance, and called the "sensible frog." It is wide at the heels, and above the shell or crust of the foot, and runs to a point like a wedge. This is to keep the heel apart; and prevent him from slipping. It will adhere to the ice like rubber. There is a cleft, commencing at the back and running nearly two-thirds the length of the frog, which is firmly united to the sole, but of a nature entirely distinct from it, being a soft, spongy substance, and very elastic. It never can be bruised until it has been cut, when it becomes a hard, horny substance, and by treading on anything solid in going fast, it springs or presses on the sensible part of the foot, and causes corns. Now, this frog should never be cut or pared in the least; let it look ever so ragged, it is then healthy. It sheds every three months; but if the knife is used, it is more or less injured.

THE SOLE.

This is the inner surface of the foot, and is both concave and elastic, and extends from the crust to the bars and frog. It is not as thick as the crust. Notwithstanding its situation, there is not as much weight thrown on it as there is on the crust; because it was intended to expand, in order to prevent concussion when the weight was thrown upon it. It is thicker at the toe, and where it connects with the crust. The principal weight is thrown upon the toe, by the coffin bone wedging in. It is not brittle, in health, and it is somewhat hollow, which gives spring to it and lessens the shock of striking the ground when in rapid motion; for if the sole was flat, there would be no spring to it, and it would be bruised by sudden contact with the ground. Thus you see that by cutting, the spring of the sole is injured and the sole itself becomes dry and hard, and brittle. But if never touched, it retains the moisture, keeps the foot from shrinking, and keeps it healthy.

THE COFFIN BONE.

Beneath the lower pastern, and entirely enclosed in the hoof, is the proper bone of the foot—the coffin bone. It fills about one half of the fore part of the hoof, to which it is fitted. It is light and spongy, and filled with numerous holes, through which pass the blood-vessels of the foot. These are

necessarily numerous, considering the important and various secretions there going on; and the circulation could not be kept up if these vessels did not run through the substance of the bone. The holes about the coffin bone carry the blood to the little leaves with which it is covered; those near the lower part go to the sole. As this bone is enclosed in the horny box of the crust, no inconvenience can arise from an outward pressure; for the bone allows free passage to the blood, and protects it from every obstruction.

The fore part of the coffin bone, besides being thus perforated, is curiously roughened, for the attachment of numerous little leaves. On its upper surface is a concavity for the head of the lower pastern. In front is a striking prominence, into which is inserted the extensor tendon of the foot. At the back it is sloped for articulation with the navicular bone; and more underneath is a depression for the reception of the flexor tendon, continued down the leg, passing over the navicular bone, and then inserted into this bone. On either side are projections, called the heels of the coffin bone, and the bottom is hollowed to match the internal part of the sole. The most peculiar part of the coffin bone is the production of numerous little leaves around its front and sides. They are prolongations of the thick and elastic membrane covering the coffin bone, and consist of cartilagenous fleshy plates corresponding with and received between the horny leaves that line the inside of the crust. The horny leaves are secreted from or produced by the fleshy ligaments, and, being five hundred in number, their union with each other is so strong that they are inseparable.

When the animal is at rest, the whole weight is supported by these leaves, and not by the sole. It is the contraction of the coffin muscle that creates so much pain when the horse is foundered. The foot is then feverish, the blood vessels are filled with hot blood, and the foot is very sensitive to the touch of the hammer or any jar upon the crust. The elasticity of the sole prevents the foot from being bruised when in violent action.

Between the coffin bone and horny sole is the sensible sole, which is of a ligamentous or tendonous nature, well supplied with blood vessels and with nervous fibres, so that it is very sensitive. A small stone under the shoe will cause great inflammation, and corns are caused by the same. The smith needs to use great care in setting the shoe.

CONTRACTED FEET.

Sometimes only *one* foot becomes contracted; this may be

caused, in a cold climate, by leaving a snowball in the bottom of the foot after the horse has been exercised until he is very warm. The coffin muscle is then relaxed by heat, and the snow-ball cools it so sudden that it contracts. In a few days the hoof shrinks to the muscle thus contracted, leaving a ridge in the hoof.

In a warm climate, it may be caused by letting a horse stand, even a short time, in cool water, after exercising and heating the blood. If you wish to bathe your horse's legs, do it with warm water, always; then you avoid all danger, and leave the limbs soft and pliable.

Also, cutting away too much of the sole of the foot, deprives it of the very substance which holds the moisture and keeps the foot healthy. Cutting the frog makes it hard and horny, and when struck hard upon a stone it is pressed to the quick, causing fever. Both practices will cause contraction.

CURE.—When first discovered, bathe the legs from the knee down, in hot water; do this twice a day for two weeks, every night stuffing the feet with clay. His shoes should merely rest on the *rim* of the foot. Never use a shoe with a swelled heel. When caused by cutting, stuff the feet with clay and use the concave shoes. Never use ointments or grease of any description upon the outside of the hoof, as they close the pores and create fever, without removing the cause of the disease.

THRUSH.

This is a very disagreeable discharge of offensive matter from the cleft of the frog. It is from inflammation of the lower surface of the sensible frog, by which pus is secreted together with or instead of horn. If the frog is sound, the cleft sinks but a little way into it; but by contraction or other causes, the cleft will penetrate to the sensible sole within. Through this fissure the discharge proceeds. It may be caused by bruises or filth. The sinking in at the quarters will cause the horn to press upon the frog, or cutting the frog will cause it to become hard and horny. It can readily be distinguished from any other disease by the offensive smell; run a stick or blade in the fissure, and the discharge will assure you.

CURE.—First poultice with linseed meal, put on hot, and let it remain twelve hours; then use a paste made of two ounces of blue vitriol, one ounce white vitriol, powdered as finely as possible, mix well with one pound of tar and two pounds of lard. Apply this in the cleft. It may be put on

tow, and pushed in. Let it remain twelve hours; and then cleanse out with soft water and soap. When dry, make the second application; also renew the poultices at night, until all inflammation disappears.

If you wish to dry it up quick, (which I do not approve,) you can use the spirits of salt, ten or fifteen drops at a time. (2.) Cleanse the foot out well, then crowd in fine salt and wash with beef brine. But in all cases of thrush, first use poultices, to relieve the inflammation. A carrot poultice is good, if linseed is not convenient. After this, stuff the foot with clay, in dry weather; this will keep it cool and moist, and will make it less liable to be bruised. The horse should take physic during the time, to cleanse the blood. Use Barbadoes aloes, pulverized, and mixed with linseed oil sufficient to make into balls. Dose one ounce.

GREASE.

In many cases swelled legs, although distinct from grease, degenerate into it. This disease is inflammation of the skin of the heel, and very seldom comes on the fore legs. The skin of the heel has a peculiar greasy feeling, and, when inflamed, the secretion of this greasy matter is stopped. The heels become red, dry, and scurvy, and, being so much in motion, they very soon crack, and sometimes ulceration and fungus will extend over the whole heel. The first appearance of grease is usually a dry, scurvy state of the skin of the heel. They should now be washed with soap and water, and relieved of all the hard substance that they can by soaking; then wipe dry, and sprinkle on pulverized verdigris; this will dry up. But when the heels are badly cracked, and ulceration has commenced, it will be necessary to poultice them with linseed oil, or, if not at hand, carrots boiled soft and mashed fine; this is a good poultice for any inflamed part.

When the inflammation and pain have gone, and there is a healthy discharge of matter, dress with an ointment of one ounce of rosin, two ounces of honey in the comb, two ounces of lard, and one ounce of caliman powder; this cools and heals very fast. If the fungus is not entirely gone, wash with two drachms of blue vitriol in a pint of water. It is well to give a mild diuretic every third day—one table spoonful of pulverized rosin, in a ball of bran mash. Mash the horse while treating for this. Sassafras tea is good for him. If the legs swell after they are healed, bandage every night, and give moderate walking exercise. Give a slight purge of linseed oil or Barbadoes aloes.

ANOTHER CURE OR REMEDY IS—Two oz. Flour Sulphur; ½ oz. Verdigris. Mix and apply after washing.

CURE FOR THE GREASE FROM INTERNAL CAUSES.—If the horse be full of flesh, the cure must be begun by bleeding, rowels, and repeated purging; after which two ounces of the following balls should be given every other day for some time, and they will work by urine the day following: 4 oz. of Yellow Resin, 2 oz. of Salt of Prunel, 1 oz. of Oil of Juniper, 2 oz. of Salt of Tartar, 8 oz. of Castile Soap, 1 oz. of Camphor. Put these into a mortar with about two ounces of honey, or as much as will make them into balls, and they will carry off the offending humors, and free the blood from its noxious qualities. But at the same time that these internal remedies are taken, outward ones should not be omitted.

CURE FOR GRAPE LEGS.

These may be cured on their first appearance, when they are in the bud, by laying on caustic, or corrosive sublimate. When the swelling is abated, make the following into a salve to dress the sores with: 1 oz. of Blue Stone Vitriol, in powder, 2 oz. of White Lead, in powder, 4 oz. of Honey. Mix these well together, and lay them on the sores with tow, to heal them; but, should they continue foul, and not frame to heal, mix four ounces of green salve, and four ounces of Ægyptiacum ointment well together, and lay it on in the above manner. The mixtures will both heal and dry up the sores.

FOUNDERS, HOW CAUSED, ETC.

The Chest Founder is produced by violent exercise on a full stomach, and drinking large quantities of cold branch water; by the use of mouldy bran, corn, or oats, or by eating large quantities of green food, such as oats, wheat, peas, etc., while performing hard labor. The seat of the disease is in the lungs; the heart and liver are also considerably enlarged, inasmuch that there is not room for them to perform their office with ease. The liver, lungs, diaphragm, and surrounding parts, are all covered with large brown spots, and are much inflamed.

There are many that hold that a horse can be foundered with grain. This is not so. The argument given is that they have driven horses or have known cases where the horse was driven under a shed and fed without watering. This may be so; but that is no argument; for a horse may be driven and stand where there is a cold blast of wind that would chill a horse as bad as water. This would create founder as well as

water; anything cold would create contraction; where, on the contrary, grain would create heat, instead of cold, and heat would relax; so that argument is worth naught. I will not pretend to say but that grain would injure a horse when hot. You might give corn meal, and it would bake in the maw, and there would be no passage; this would kill, but not founder. You are well aware that to heat a tire, then place it over the felly, it is perfectly loose, but when you put on cold water, it contracts to the felly and strengthens the wheel. So you will see at once that it is cold that causes founder. Cold contracts and heat relaxes, and grain would create heat.

CURE.—When the horse is foundered, take one and a half or two gallons of blood from the neck vein; then give, as a physic, six drachms of Barbadoes aloes, dissolved or in balls. Cover the horse over; then commence bathing with as hot water as you can use. Keep this up for an hour, at least. Then stretch an old pantaloon leg over each of his fore legs, bind it around the hoof, then fill in with hot boiled oats; give as a drink sassafras tea, made from the root; and give bran mashes, with a table-spoonful of pulverized rosin. He should have a mash once a day for three or four days. This will cure him.

But in case of founders of long standing, or even if the hoof has shrunk to the contraction of the muscle, it will be necessary to treat it somewhat differently. The bleeding should be omitted, the legs bathed twice a day, and the feet should be poulticed with flaxseed meal three times a week, at night, or in day time if he is not at work. If he could run out to a marshy pasture, it would not be necessary to poultice. But he must have something to act on the blood. Take of digitails four drachms, emetic tartar four drachms, nitre six drachms; divide this into two doses, and give one in three days. Between the days that this is given, give bran mashes mixed with sassasfras tea. This physic may be given once in every three weeks, with the feet always to be kept moist. It will take three months to effect a cure. When of long standing, the muscles of the shoulder sometimes contract, as in sweeney. In this case a seaton of from nine to fifteen inches must be used, according to the contraction.

THE NAVICULAR BONE.

This is placed at the head of the coffin bone, and at the foot of the lower pastern, and is shaped like a wedge. Its office is to protect the coffin-joint at the back part. The frog getting dry and feverish, would allow the ligaments to be

bruised, and cause lameness—another reason why the foot needs great care.

QUARTER CRACK.

For this, pare with a sharp knife from the hair down, taking away the whole back part of the hoof down to the quick; then pare the other down thin; then set your shoe only so far as the hoof runs. By this means the shoe cannot spring down upon the heel. The hoof will then grow down firm and sound.

Heaves.

REASONS WHY IT IS NOT IN THE LUNGS.—*First.* If the disease was in the lungs, it would create inflammation, and have the same effect as inflammation of the lungs by cold. The horse would be weak and drooping, without appetite, and really could not be driven two miles as any person would naturally drive a horse. But a heavy horse can be driven from eight to twelve miles within an hour. This is positive proof that it is not in the lungs.

Second.—Take a heavy horse and turn him out to pasture forty-eight hours, and he will breathe clear and easy, showing no signs of the heaves. The grass has not reached the lungs, still it has stopped the hard breathing; but if you will give the horse cold water to drink, he will cough. Has the water touched the lungs? No; but it has touched the disease. This is another reason why it is not in the lungs.

I will tell you where the disease is, and what it is caused by. *First.*—A dainty horse is not liable to heaves, but a hearty eater is liable to this disease—not from the amount of food that he eats, but from the hoggish way of eating. There are two pipes leading to the stomach and lungs; where they meet there is a throttle-valve. A horse on eating coarse food, scratches his throttle; then, by a hard drive, and warming the horse, he takes cold in his wound, and it becomes a running sore or canker. By turning the horse to grass, the juice cleanses and washes the wound; the grass being cool takes the inflammation from the disease; the swelling is gone, and the horse breathes free and easy as ever. This is positive proof that it is not in the lungs. Then, by feeding with coarse and dry hay, it irritates and creates inflammation and causes the horse to breathe hard again.

CURE.—Take Balsam of Fir and Balsam of Copavia, equal parts; add enough calcined magnesia to make into balls.

Give a middle-sized ball, night and morning, for ten days or two weeks—a ball about the size of the yolk of an egg. This a sure cure. I never made a failure in any case. You should be careful about feeding for two weeks, after giving the medicine. Cut feed, and wet the hay. A little brown sugar in his food for a few days would be good.

Lung Fever.

This disease always makes its appearance by a chill, the horse will shake and tremble like a person with the ague. Whilst the chill is on, take a half a pint of fine salt, put in a bottle of water, shake well, and drench the horse. This will release him entirely from the chill, and create perspiration, and he will be quite sick for a few minutes; but it will drive the cold entirely out, and he will look bright, and feel entirely well, in a few hours. But if you should not discover him while the chill is on, it will require different treatment. If he has been free from the chill for five or six hours, the symptoms will be, eyes inflamed, nostrils distended, breath short and quick, and he will stand with his head down; his pulse from fifty to one hundred. You will find it under the jaw, just below where you buckle the throat latch. By putting your ear back of the fore leg you will hear a quick, heavy beating of the lungs. He will have no disposition to move or eat, but will drink; he never lies down. These are sure signs of inflammation of the lungs.

The causes of inflammation of the lungs are many. It may be brought on by filthy stables, but is usually by sudden changes from heat to cold, and *vice versa*. The membrane that lines the cells of the lungs is very sensitive; there is also an intimate connection between the lungs and the pores of the skin; by stopping the insensible perspiration, a cold and cough ensue. A horse is driven until a sensible perspiration is pouring from him, then he is left in a current of air, which closes the pores of the skin, thus arresting the perspiration, and driving the inflammation which it causes to the lungs. The majority of cases are very sudden. At first, the pulse is not much quicker, but the artery is plainly to be felt under the finger, and of its usual size. The pulse no longer indicates the expansion of the vessel; in some cases it eludes a most delicate touch; the legs are cold, and the nostrils expanded; the flanks begin to heave with a quick and hurried motion, a symptom of pain; the membrane of the nose is very red; he stands with his legs abroad; his countenance indicates suffering, and he looks mournfully towards his

flanks; he is unwilling to move—scarce ever lies down; if he does, 'tis only for a moment, from actual fatigue.

The duration of this disease is very uncertain. It will in some cases destroy in from twelve to twenty hours, and sometimes they will last for weeks. In sudden attacks of this kind, the lungs are entirely destroyed, resembling one black mass of blood.

The disease invariably makes its appearance with a chill. He commences trembling and shaking as if half frozen. At this stage of disease, the object should be to get up a reaction. Dissolve half a pint of fine salt, in warm water; shake it well, and give as a drench; then clothe him, and in fifteen minutes he will be wet with perspiration; bathe his legs in warm water.

But if the fever has commenced, it will require different treatment; if it has been on, say six hours, it will be necessary to bleed, and very severely so. Open as large an orifice in the vein as possible; the object is to get control of the blood. The heart is working very hard to force the blood through the lungs. Bleed until the pulse is much slower, or flutters; then bathe the leg with as hot water as he can bear; bathe frequently, to get up circulation in the extremities.

If the attack is a severe one, blister the brisket, and the sides, as high up as the elbows—a mustard blister, if it will do; if not, with the flyblister—four oz. lard, one oz. rosin, and one oz. flies. It will not do to purge; there is so much sympathy between the bowels and the lungs, purging would transfer the inflammation to the bowels. In such a case, you must use clysters. Take eight oz. Epsom salts dissolve in warm gruel, and inject; this will start the bowels, which are somewhat relaxed. You must now use cooling or sedative medicines. Take of digitails one drachm, one and a half of emetic tartar, and three of nitre; give three times a day; this will have an immediate effect on the heart, lessening the number of pulsations, and producing an intermittent state of the pulse; every six or seven beats, there will be a suspension while two or three could be counted. From this he will amend. Now reduce the dose to one half, and in a few days, it will not be necessary to give any medicinal of any kind.

He should now have oatmeal gruel, or flaxseed meal gruel; they are strengthening. Mashes may be given, or green food, in small quantities. For inhaling, which is one of the most essential things to be done, use—digitails one half ounce, nitre one ounce, and of balsams, fir and copaiva, two ounces

each. Mix these together with one pint 95 spirits, and add one pint hot rain water. Cover the horse all over, letting the blankets reach the ground, so that no air can get under them. Then hold the mixture under his nose, and, at the same time, touch a hot iron in the compound, and let him inhale the steam or fumes arising from the mixture. This will relieve the lungs from fever, drive the inflammation to the surface, and the cure is positive.

ADHESIVE PLASTERS.

These plasters should be used over parts that have been strained, or otherwise weakened, and on deep-seated inflammation of the loins or back sinews. They are always to be applied warm, when they will adhere for a long time. The following is a good plaster:

Take of Burgundy or common pitch five ounces, of yellow wax one ounce, of tar six ounces. Melt together. When cooled to blood heat, add half a drachm of pulverized cantharides. Stir well together.

When you apply it, warm or melt it over, and rub it well into the hair upon the sprain; then, while it is yet warm, (for it should be applied as hot as possible,) spread over it a lint of tow, well picked; pat down with the hand. This will make a strong covering, and will remain for months. It will gradually remove deep-seated inflammation, and, by its pressure, promotes the absorption of any callous or thickening beneath; at the same time, as a bandage, it gives strength to the parts.

PHYSICING.

There is more injury done in the practice of this than in any other medical treatment of the horse. The old practice has been to physic and bleed every spring, and this is necessary where the horse is really sick. When you change him from the pasture to the warm stable and dry food, it is also good, the horse must be prepared for it. Give three or four mashes before the physic, and, in the majority of cases, they will be sufficient without it, especially if the bowels are slightly moved, for really the less medicine given the better.

After the physic is given, the horse should have walking exercise for an hour or two; but, when it begins to operate, he should be kept still as possible, or the medicine would be likely to gripe, and perhaps irritate the intestinal canal, and cause inflammation. You can give him a small amount of hay, and as much mash as he will eat, and as much water with the chill off as he chooses to drink; if he will not drink

tepid water, give him about a quart of cold water every hour. When the purging ceases, give a mash twice a day, until you give more physic, which should be only once a week.

Barbadoes aloes is the best purgative, being always sure and safe. The dose, with the horse prepared by bran mashes, would vary from five to seven drachms, the latter sufficient for any horse. You can dissolve in warm water, and give as a drench, or make into a ball with linseed oil, and lay upon the roots of the tongue, letting go the tongue at the same time.

The next best purgative is the Croton nut; the fatina or meal of the nut is used. It should be made into a ball with linseed oil. Give from a scruple to half a drachm, according to the state of the subject. It acts more speedily than aloes, but causes more debility. Linseed oil is uncertain, but safe in doses from a pound to a pound and a half. It leaves the horse in very good condition.

POULTICES.

Few horsemen are aware of the value of these simple preparations, in abating inflammation and in relieving pain, cleansing wounds, and causing them to heal. They are the best kinds of fomentations; they continue longer and keep the pores open. In all inflammations of the foot they are very beneficial, and in cases of contractions. A poultice that retains the heat and moisture longest is the best. They will relieve swellings, take out the soreness from the pores, and draw out the unnatural substances. Linseed meal makes the best poultice; it will hasten any tumor that it is necessary to open, and cleanse any old one, causing a healthy discharge, where it is offensive. But in this case—where the ulcer smells badly—add two ounces of pulverized charcoal, or chloride of lime—half an ounce to one pound of meal. This is good to use in grease or cracked heel.

A poultice should never be put on tight. Carrots are very good, mashed fine, after boiling soft. The coal may be used in this also, where the parts smell offensively.

WIND GALLS.

These appear oftener on the hind than on the fore-legs. It is a filling in of a mucous fluid in bags or sacks. It is caused by undue pressure from violent action, and by straining the tendon. These bags inflame, and fill larger and harder; they always form about the joint, as so many tendons concentrate there. Very few horses are perfectly free from them. At first they may cause lameness, but, in the majority of cases,

they do not. It has been thought that these bags were filled with wind, and, in some cases, they have been opened, but this causes inflammation, and would lame the horse. The way to treat them is with a powerful blister directly on them, and then bandage; after the blister is formed you must bathe it in some astringent. A decoction of oak bark is good. By this treatment the mucous is taken up by the absorbents, and you will have a *cure*. You must be very careful in driving for several days.

THE ACTION OF THE KIDNEYS ON THE BLOOD.

The blood contains a great quantity of watery fluid, unnecessary for the nutriment or repair of the frame. There also mingles with it matter which would become noxious if allowed to accumulate too much. The kidneys are actually employed in separating these fluids, and in carrying off a substance, which, as an ingredient in the urine, is called the urea, and consists of what would be poisonous to the animal if remaining. The kidneys are two large glandular bodies placed under the loins, very much the shape of a kidney bean. The right kidney is forward under the liver; the left is back by the stomach and spleen. A large artery runs to each, and carries about one-sixth part of the whole blood that circulates through the frame. It divides into numberless little branches, most complicated, and coiled upon each other. The blood has waste parts, which, if allowed to remain, would be very injurious; and these must be separated from it.

The fluid separated varies materially in quantity and composition, even during health—more so in the horse than any other animal; and there is no organ so much under our control as the kidneys.

Diuretics are the most useful medicines, and, at the same time, the most injurious if improperly used.

In fevers, and in inflammation generally, for diuretic, use nitre and digitails, on account of their sedative effects. They stimulate the kidneys to separate more than the usual quantity of water from the blood, and lessen the quantity of the latter. The object in this is to reduce the circulation, and thus ease the heart in its labor by calming the excitement. An overflow of blood gives quicker action to the heart, and causes the heating you will notice in lung fever. Diuretics lessen the blood, and give more perfect control over the heart.

In cases were the legs are swelled, the absorbents set to work and take up, and pour into the circulation, the fluid which has been effused into them.

The legs of some horses cannot be rendered fine, nor kept so, without the use of diuretics; nor can what is called grease heel—frequently connected with these swellings, yet cured without the use of them, always let the horse have plenty of tepid water—the more the better. You must always be careful not to keep him too warm; for if he sweats the medicine, instead of stimulating the kidneys, passes off in perspiration.

ANTIMONY.

There are several valuable preparations of this. The black sulphuret of antimony, a compound of sulphur and antimony, is a good alterative. It is given with more sulphur, and with nitre, in varying doses, according to the disease, and the slow and rapid effect to be produced. The dose if you expect to continue it, should be at the most, four drachms. It should never be bought in powder, whatever may be the trouble to pulverize it, for it is frequently adulterated with lead, magnesia, forgedust, and arsenic.

SWEENY.

The disease is on the side of the shoulder. The horse suffering from it will be quite lame, and will stand with one foot before the other; or if it is both shoulders, he will change from one to the other. The use of the shoulder is sluggish, and in breaking he will drag the foot, instead of raising it from the ground. It is caused by a strain or bruise, or by favoring the foot when diseased in some other part.

The membrane or muscle of the shoulder will shrink much. Where the horse has not been lame long enough to know how to ease himself by standing, you can easily tell what the trouble is by pressing with the thumb upon the muscle, which may be shrunk but a little, yet when you press the point affected, he will shrink from the touch.

CURE.—The only way this can be cured is by a seaton or rowell. The object of this is to create inflammation of the membrane. This seaton in these diseases should be from five to fifteen inches in length. The best article to use for it is tarred rigging rope; this should be turned every day for from two to three weeks. To insert this, you must make an incision on the top through the skin and the membrane under the skin; the same at the bottom. Procure a long, thin iron needle, with a large eye, and thread with strong twine, to which fasten the rowell; run the needle through the two openings, drawing the rowell through, and then tie, leaving

eight inches slack to tie with. In some cases it will be necessary to wet the rowell with oil of turpentine or tincture of cantharides—either will do. Bathe the shoulder every day with as warm water as he can bear.

If it has the desired effect, it will discharge freely. This will relax and loosen up the membrane, and make the parts fill out smooth. Keep clean by soft water and soap, so that the discharge will not remove the hair. If you apply grease on the hair under the cut, it will prevent the hair from coming off.

HIDE BOUND.

This is not so much a shrinking of the fatty substance between the skin and the muscles, as it is an alteration of the skin itself. It is a drying up of the oily moisture of the skin; it thus becomes dry and hard, the scales to the cuticle no longer yield to the skin, but separating in every direction, turns the hair and gives it a staring rough look, which is an indication that the horse is out of condition. The vessels of the skin and bowels, as well as the stomach, are deranged. It is a symptom of disease of the digestive organs.

At first, give a bran mash, and, if it can be had, sassafras tea. But in severe cases use levigated antimony two drachms, nitre three drachms, sulphur five drachms—give every night in a mash. The antimony acts on the skin, the sulphur on the bowels, and the nitre on the urinary organs. Rub him and give him warm clothing. The skin will soon become loose, and the horse be in condition again.

COUGH.

Use elecompaine roots, horehound and smartweed with six red pepper pods to two ounces of ginger root; boil till all the strength is extracted, then strain through flannel; add two quarts of molasses to every gallon of this extract, and boil all together for half an hour. Give one gill twice a day. Use an ox horn, or a crooked tin horn. Raise the head, and draw the tongue out on the left side; put the small end of the horn on the roots of the tongue, and empty the contents; then let go the tongue. Swab the throat every night with this mixture, using a whalebone with linen wrapped on the end. This is a sure cure for coughs.

Among all diseases to which this noble creature is subject, none has given more perplexity to Farriers than a settled Cough; indeed, it too often defies all the attempts of art, and the horse frequently becomes *Asthmatical*, or *Broken-winded.*

FOR RESTORING HAIR TO GALLED SPOTS ON HORSES.

Take one pound red clover blossoms and six quarts of water, simmer to a thick syrup—then add sufficient barbary tallow to make a paste. This form is the best ointment for this purpose extant.

FOR SPAVIN.

Five ozs. euphorbium; 2 ozs. spanish flies, (fine;) 1 oz; iodine, dissolve with alcohol; ½ oz. red precipitate; 1 oz. corosive sublimate; ½ oz. quicksilver; 6 ozs. hog's lard; 6 ozs. white turpentine; ¼ lb. verdigris. Melt the lard and the turpentine together, then while hot add all together. Mix well; when cold, fit for use. Rub it in thoroughly on the spavin every day for three days, then wash clean with soap-suds; omit for three days, and then repeat for three days again, and so on until a perfect cure is produced. Should it blister, use it more cautiously.

PREPARATION FOR BLOOD SPAVIN.

One half pound blood-root, 1 qt. alcohol, 2 oz. of tannin, and a quarter of a pound of alum.—Mix and let it stand, shaking it several times a day, till the strength is all in the alcohol, and bathe the spavin twice a day, rubbing it in with the hand.

CURE FOR HEAVES.

Take smart weed, steep it in boiling water till the strength is all out; give one quart every day mixed with bran or shorts, for eight or ten days. Give green or cut up feed, wet with water during the operation, and it will cure.

ANTI SPASMODICS.

There are but few of these, and the horse is subject to but few spasmodic diseases. Opium is the best for general effect and that exerted particularly on lock-jaw, the oil of turpentine as a specific for spasms of the bowels.

ANTI-SPASMODIC TINCTURE FOR MAN OR HORSE.

Oil cajeput 1 oz. oil cloves 1 oz. oil peppermint 1 oz. Oil anise 1 oz. alcohol 1 quart. Mix all together and bottle for use. Dose for a horse, 1 oz. every fifteen minutes in a little whiskey and hot water, sweeten with molasses, continue until relieved. Dose for a man, one teaspoonful.

WORMS IN THE HORSE, HOW TREATED.

There are several kinds of worms in the intestines, and

they are hurtful only when in large quantities. The long white worm resembles the common earthworm, and is from six to ten inches long. They are in the small intestines, and, when in large numbers, consume much of the nutritive part of the food, or the mucous of the bowels. Then the smaller and darker colored worm, called the needle worm, in the large intestines. In many cases they descend into the rectum in large quantities; they irritate the fundament, and annoy the horse. This is the trouble when he rubs his tail very much.

The horse shows this disease by falling off in flesh; his hide will be tight, and the hair looks bad and sets forward; the eye has a dull look, and at times he will scringe and shrink down; he sometimes passes worms, and he cannot be kept in condition.

CURE.—One ounce of aloes dissolved in warm water, and given as an injection. This will succeed in the most of cases. If not give one pint of neatsfoot oil as a drench, and one pint as an injection. These will not fail. Give mashes after this for a few days.

It is well known that horses which have many worms can never thrive, or carry much flesh. If the breeding of these vermin were prevented, it would add much to the strength of the horse; and it might be done by giving him a decoction of bitter herbs, such as wormwood, in Spring. It may be boiled, or steeped in hot water, and given two or three times a week. Or a decoction of wormwood, buck-bean, gentian root, and camomile flowers, of each a large handful, boiled in a sufficient quantity of water, and given will answer the end.

ANODYNES.

Of these there is but one in horse practice. Opium is the only drug that will lull pain. It also acts as an astringent, in doses of one, two and three drachms.

FARCY, ITS TREATMENT.

When the Farcy attacks only one part of a horse, and that where the blood-vessels are small, it may be easily cured; but when the plate vein is affected and turns corded, and especially when the crural veins, withinside the thigh, are in that condition, the cure is very difficult, and the creature is rarely fit for any thing but the lowest work after it.

Bathe the legs every night in hot water, into which put a shovel of hot wood ashes, making a weak ley. When he regains his appetite, be very careful in feeding. Give him

mashes at least twice a day, until he gets his strength, then give green food, if possible.

In very severe cases of farcy, internal medicines will be necessary. Use of corrosive sublimate, *ten grains*—increased to a scruple with two drachms of gentian, and one of ginger; repeat morning and night, until the ulcers disappear.

PLEURISY, HOW TO BE TREATED.

This is an attack of the membrane covering the lungs, and the lining of the chest, called the "pleura." The symptoms are nearly the same as in inflammation of the lungs. The horse has no disposition to lie down or to move about; the neck will be the same as in lung fever; nostrils distended, and the membrane of the nose very red; he breathes very hard, with a kind of grunt; the legs will be cold, and he will have a hard full pulse. The blood, however, is not obstructed in its passage through the lungs. By pressing on his side, he will give symptoms of pain in a very decided grunt.

CURE.—Blister both sides of the chest, and bathe the legs in hot water. Or boil bran, and then put an old pantaloon leg on over his, and fill in around with hot bran; this will get up a circulation in the extremities. Then give one and a half drachms emetic tartar, two drachms digitails, three drachms nitre. Keep well covered with warm clothing. Use one ounce of cream tartar in two quarts of tepid water, for a drink. Be sure to keep the legs warm by hot applications and bandages. Use these medicines until a cure is effected.

STAGGERS.

There is but little of this disease in the Northern States, but it exists to a great extent in all the Southern. The food is the principal cause; there is a great quantity of diseased corn used, and too much of any kind is usually given; then as much water as he will drink after it, which generates an unhealthy gas in the stomach, and causes distention; the blood is inflamed, and rushes to the head, and the brain is somewhat inflamed. The horse staggers about, or becomes sluggish, and stands with head down; the eyes look glassy; in some cases, he will rear, and fall back, or run; he will not eat, but hold the hay in his mouth, and then drops it; he sweats profusely, and in a short time will fall and die.

CURE.—First, physic with one ounce of aloes dissolved in warm water, and given as drench; in one hour, give half an ounce more of the aloes, and continue this until it operates. As soon as the first aloes is given blister the head with a

strong fly blister apply this over the brain, from below the ear, *nearly* down to the eye; then bathe the legs with as hot water, as you can use, and bandage them with flannel; keep them aswarm as possible. Then give one drachm of digitails, one and a half of emetic tartar, and three drachm sof nitre. If it is to be repeated, use half of the above amount in three hours. Then if he has any disposition to eat, give bran mash, with one table-spoon full of pulverized resin; use this for a week as he recovers, and feed and work lightly until he regains his strength. If he is bound up, it may be necessary to use injections, which are always beneficial.

WARBLES, SITFASTS AND SADDLE GALLS.

These are caused in many cases by using a blanket under the saddle in hot weather, thus scalding the back, and causing these little lumps to appear; and when they ulcerate, they are called "*sitfasts.*" The ulcer has a calloused spot in the center. When they first make their appearance, rest will remove them; but if the horse is to be used, you must remove the stuffing from the pad of the saddle, that the bearing may not come on the ulcer. Bathe in strong salt water, to remove the enlargement; but if it does not effect this, and it is really a sitfast, apply a blister; this will dissolve it; then apply the resin and honey ointment to heal it. A horse with high withers, long back, and broad loins, will make the best saddle nag, and carry his rider with ease. In hot weather, it is a good practice to bathe the back with salt water, when the saddle is removed at noon and night.

FOR INFLAMMATION OF THE LUNGS IN A HORSE.

First a thorough bleeding, then would give tincture veratrum varide, half an ounce; laudanum, four ounces; tincture aconite, quarter of an ounce; shake well together, and give a half tablespoonful every three or four hours, in some water, well sweetened; and should it not bring down the pulse the dose can be gradually increased to a tablespoonful, and soon as the horse recovers so as to eat and lie down naturally, would keep him on hay alone perhaps with a few carrots or potatoes, and daily give a bran mash with saltpetre, crude antimony and sulphur for ten or fifteen days, and you will prevent dropsy of the chest, which is a sequel of that disease.

FOR COLIC IN HORSES.

Sulphur ether, one pint; aromatic spirits ammonia, one pint; sweet spirits nitre, two pints; opium quarter of pound; asafœtida, (pure) half pound; camphor, half pound; put in a

large bottle, let stand fourteen days, with frequent shaking, and it will be fit for use. Dose two ounces every two, three or four hours, until the horse is relieved. Should be given in water well swectened.

ANOTHER REMEDY.—One ounce laudanum; one ounce sweet spirits of nitre; one ounce tincture asafœtida, one tablespoonful capsicum; from two to three ounces carbonate soda; half pint whiskey; half pint water. Mix and give at one dose, and if not better in twenty five minutes, repeat half dose.

STOPPAGE OF WATER, HOW TREATED.

This disease in most cases is caused by allowing the horse to become foul, and what is called a beam thereby forms in the end of the penis. The horse will stand and weave, or stretch out; then paw and kick his belly with his hind legs; he may drop down in harness, and sometimes break out in a profuse sweat. The only thing to be done in this case is to draw his yard carefully, and run the finger around the head, where you will find two or three hard substances; withdraw them and wash the sheath clean, and grease it with lard.

In some cases, it originates from contraction of the muscle of the loins, or inaction of the kidneys. To cure this, bathe the loines with hot water for half an hour; then bathe with hot vinegar and pepper-sauce; then cover the loins with three or four thicknesses of blankets. Then mix of turpentine one ounce, sweet spirits of nitre two ounces, and give as a drink. Give a bran mash, with one table-spoonful of resin in it, every day for a week, and the cure is complete.

COLIC OR CHOLERA IN MULES.

This appears to be a prevalent disease on the plantations, and is brought on by giving too much food and water at one time, and then immediately putting them to work. The hard work retards digestion, and a gas is generated from the food and water, which fills the stomach and bowels, and sets the bots at work. The gas would kill the bot, and, to save himself, he bores into the membrane of the stomach, or tries to get out at the meat-pipe, or by the passage between the stomachs. They will thus stop up the passages, sometimes, and kill the animal. But if the passages are open, the gas will pass into the bowels, and then the disease is colic. He will be much swollen and distended, breathe short and hard, and will fall or lay down, and get up; ears will lop over on each side, and eyes look dull and heavy. When the mule is first taken, take him out of the stable and keep him as still

as possible, and, in the majority of cases, he will recover without the use of medicine.

CURE.—If he does not thus get over it, take one ounce laudanum, one ounce ether, two table-spoonfulls of soda, two drachms of peppermint; put with half pint hot gin, and give as a drench. Then give injections of one ounce of aloes dissolved in warm water. This is an effectual cure.

COLTS BROUGHT UP BY HAND.

It is a frequent remark, that cosset colts, are worse to break than those that have never been handled up to two or three years old. The reason is that they are spoiled by petting them, and allowing them to do as they please. When playing with colts, you should always make them do as you wish, and then, if they are learned to do as you will in playing, they will not become stubborn when you wish them to work. The great object in laying the horse down to make him understand that we can do as we please with him, and then he sees there is no use resenting, and we have gained our point. After this, he obeys without difficulty, and that stubborn, willful feeling is subdued. You may then teach him anything you please.

VEGETABLE CAUSTIC.

Make a strong ley of hickory or oak ashes, put into an iron kettle and evaporate to the consistency of thin molasses; then remove into a sand bath, and continue the evaporation to the consistency of honey. Keep it in a grand stopped glass jar.

This caustic is very valuable in fistulas, cancers, scrofulas and indolent ulcers, particularly where there are sinuses necrosis (or decay of bone) and in all cases where there is proud flesh, and also to excite a healthy action of the parts. It removes fungous flesh without exciting inflammation, and acts but little except on spongy or soft flesh.

TO CURE WARTS.

Take corrosive sublimate and red precipitate, powdered and mixed equal parts; will cure the worst wart in the world on horses or cattle.

If the wart is large and loose, tie a fine strong cord around it close to the skin. In a short time the wart will come off, then apply the powder until the wart is eaten down below the skin, then wash off and rub on a little sweet oil, and it will soon heal over. If the wart is dry, scratch it with a pin or point of a knife until it bleeds, then rub on the powder.

It will make a dry scab; pick off the scab and put on the powder again until it is all eaten off.

HOOF MEDICINE.

Take Rosin, four ounces; beeswax, five ounces; lard, two pounds; Melt together; pour it into a pot, add three ounces turpentine; two ounces finely pulverized verdigris; one pound tallow; stir all until it gets cold. This is one of the best medicines for the hoof ever used. It is good for corks or bruises of the foot.

TO RESTORE THE APPETITE.

Use of pulverized carraway seeds and bruised raisins, four ounces each, of ginger and palm oil, two ounces each. Always use twice as much of the first as of the last, in whatever quantity you wish to make it. Give a small ball once a day until the appetite is restored; use mashes at the same time.

FOR STOPPAGE OF THE BOWELS.

Take two quarts of soft fresh horse manure, add one quart of boiling hot water, then strain through a common cloth strainer; give one pint as a drench. This will not fail for man or beast; for a man, dose one table-spoonful every hour until it acts.

SALVE FOR MAN OR HORSE.

For all kinds of old sores, use honey and rosin, melted together; add lard enough to make a paste; when cool, it is fit for use. There is no salve better than this; its medicinal qualities are excellent.

TO SOFTEN THE FEET.

Spirits of tar, two ounces; fish oil, four ounces. This is very penetrating, to use where the feet are hard and brittle. Rub it in with a brush upon the crust and sole every night.

STIFLE.

This is a strain of the stifle muscles only; the stifle joint never gets out; if it should, the horse would be worthless. The stifle shoe should never be used.

CURE.—Take the whites of six eggs, and two ounces of alum, pulverized; mix well together, and rub on the stifle muscles; dry with a hot iron. One application will probably be sufficient.

2.—One ounce of sugar lead; one pint of alcohol; mix, and apply three or four times a day, until a cure is effected.

TONICS.

Where it is necessary to use tonics, gentian is one of the best vegetables, especially in chronic debility. It is best, united with cammomile and ginger. Gentian, four drachms; cammomile, two drachms; ginger, one drachm; give in balls.

MERCURIAL OINTMENT.

Of quicksilver, one ounce; lard, three ounces; stir until there are no globules to be seen. This is used sometimes in preparing sprains and spavins for the regular spavin ointment, rubbed on once a day, for two or three days, before using the ointment.

For all splints, bruises, and swelling of the limbs, use thoroughwort and mullen, steeped and applied as hot as possible, with bandages.

SPAVIN AND RINGBONE.

Cantharides, four ounces; origanum, two ounces; sulphate of zinc, one ounce; Venice turpentine, three ounces; murat. cinct iron, two ounces: verdigris, three ounces; oil vitriol, two ounces; fresh lard, one pound. Shave the hair from the part diseased, and rub the parts with the medicine. You must use your own judgment in using this medicine; that is in the length of time necessary to remove the callus. It must be used every other day; this will dissolve the ossified substance, and ooze it out. When you see the lump is diminished enough, then use the same astringent as I have directed in the other cure, that is, white oak bark and alum; a quarter pound to a half gallon of bark juice, boiled down to a strong decoction. Use morning and evening.

SPAVIN AND RINGBONE RECEIPT.

The first-named disease comes at the lower part of the gambrel joint. It is caused by a strain or bruise—either will cause it; this opens the pores, and causes the substance to concentrate at one place, and forms in a gristly or bony substance, and causes the joint to become stiff and sore. The horse sometimes becomes lame before enlargement is perceivable. In some cases it will continue to grow for two years; it will then become a hard bone. The enlargement

at this stage, cannot be removed—you may kill the disease, and kill the lameness. The great object with this disease is stop the leakage. There has nothing been used as an astringent; when by removing the lump, without the astringent, it leaves the parts loose and open, but if used, it closes and stops the pores; then, by letting the horse stand until it heaves, becomes firm.

CURE.—Four ounces green euphorbium, fine; one ounce Spanish flies, pulverized; four ounces corrosive sublimate; four ounces red precipitate; six ounces white pine turpentine; four ounces iodine; six ounces lard; melt the lard and turpentine together; after it is nearly cold, add the other articles, and stir until it is cold; it is then ready for use.

Then rub the enlargement until it is warm; then rub on the ointment, and let it remain for twenty-four hour; then take lard, and rub upon it until all of the ointment is taken out. Let it remain one day, then apply the medicine again; keep this up until the enlargement is gone; then use oak bark as an astringent to bathe it in, and bandage until well, keeping it well saturated with the oak bark water.

You may use the same ointment for 'thorough-pin;" after it is blistered sufficiently deep, use the oak bark and bandage until healed. The same for blood spavin and wind puffs. It will be necessary to use a pad under the bandage in "thorough-pin," to make it bear evenly.

Keep the horse quiet, while using these medicines and on a low diet.

HOW TO CLEAN AND OIL HARNESS.

First take the harness apart, having each strap and piece by itself; then wash it in warm soap-suds. When cleaned, black every part with the following dye: one ounce extract logwood, twelve grains bichromate of potash, both pounded fine; when put into two quarts of boiling rain water, and stir until all is dissolved. When cool, it may be used. You can bottle and keep for future use if you wish. It may be applied with a shoe-brush, or anything else convenient. When the dye has struck in, you may oil each part with neats foot oil, applied with a paint-brush, or anything convenient. For second oiling use one third castor oil, and two-thirds neats foot oil mixed. A few hours after, wipe clean with a woolen cloth, which gives the harness a glossy appearance.

The preparation does not injure the leather or stitching; makes it soft and pliable, and obviates the necessity of oiling as often as is necessary by the ordinary method.

STRENGTH OF FOOD USED FOR HORSES.

It will, perhaps, be interesting to the horseman and farrier to know how much nutritive matter is contained in the different kinds of food given the horse. The quantity cannot be considered as expressing the actual value of each, because other circumstances beside the simple quantity of nutriment seem to influence their effect in supporting the strength and condition of the horse. Yet many a useful hint may be learned when the farmer looks over the produce of his soil. The list is taken from Sir Humphrey Davy's Agricultural Chemistry:

PARTS	of	contain	PARTS of nutritive matter.		
1000	"	wheat	955	"	"
"	"	barley	950	"	"
"	"	oats	744	"	"
"	"	peas	573	"	"
"	"	beans	570	"	"
"	"	potatoes	230	"	"
"	"	red-beets	148	"	"
"	"	parsnips	99	"	"
"	"	carrots	98	"	"

Of the grasses, 1000 parts of the meadow catstail contains, at the time of seeding, 98 parts of nutritive matter; narrow-leaved meadow grass in seed, and sweet-scented soft grass in flower, 95; narrow leaved and flat-stalked meadow grass in flower, fertile meadow grass in seed, and talefescue in flower 93; creeping soft grass in flower, 78; common turnips, 42; long-rooted clover, 39; white clover 32; and lucerne, 23.

TO CURE CRIBBING.

If caused by irritation of the teeth growing too near together, saw between the upper and lower front teeth. If a simple habit, arrange the stall so as to make it impossible for him to crib. This you can do by making the stall plain, with a simple box manger in front, rather low, but extending the whole width of the stall. Immediately over the front edge of this plain box manger, hang a roller of about six or seven inches in diameter, on pivots, which must be so arranged that it will turn easily. This roller, extending clear across the manger, offers the only means within reach on which to crib. The horse, in cribbing, will press the front teeth firmly upon this roller, pulling down and towards him, which causes the roller to turn from under his mouth, and he is defeated in his efforts. There is no trouble in

breaking a young horse of this habit by this means. A very good way is to feed a horse from a basket hung loosely by a cord to something overhead. The roller, properly adjusted, is, however, much the best means.

TO PREVENT HORSES JUMPING.

Have a good firm strap halter made that will fit the horse nicely, with a wide strap stitched to each side, so as to come over the eyes. Cut holes in this strap over each eye; over these eye-holes put fine wire-cloth, supported nicely by wires so that it will not possibly touch the eyes. Before a horse attempts jumping over a fence, he will put his head over to calculate upon the height and distance he is about to jump; but by looking through this wire-cloth everything is so magnified in appearance, that he is disconcerted in his efforts to do so, and is afraid to jump.

BOTS, OR GRUBS.

There are a great many horses lost with this disease. It is impossible to put anyting down a horse to kill a bot, that would not kill the horse. I will take what the most of farriers will prescribe for this disease, and kill any horse in three or four days, and I will give you reasons for it. First, a bot never works when the stomach is in order; as soon as the gasses of the stomach becomes deranged, the bot goes to work—and you can derange the stomach by giving strong medicine. The bot goes to work in the maw; after he gets worked in a short distance, you can put nothing there that he can taste, without letting loose from the maw; and by giving strong medicine, anything that has any tendency to burn or hurt the bot, he would work into the maw to get rid of the medicine; and if you put any sweets down, the bot could not eat it, because his head is in.

Now, I will give you a sure and positive cure for this disease. Take a bucket half full of hot water; then procure a quart bottle; set the bottle down in the hot water; then bleed the horse in the neck vein, and let the blood run into the bottle. When full, drench the horse with this hot blood. The blood goes to the maw so much hotter than the natural stomach, that the bot becomes relaxed, and lets loose. He then sucks his fill of this sweet blood, and passes off from the horse.

QUINSY.

The symptoms of this disease are something like inflammation of the lungs—difficulty of breathing, eyes inflamed, nostrils distended, breath quick and short; he stands with

his head down, and has no disposition to move about, and you will hear a rattling in the throat, caused by an accumulation of mucous matter in the glotis or throttle, which becomes swollen so as to be perceivable on the outside of the throat. A horse with this disease sometimes has an inclination to eat, but with the lung fever—never. Quinsy is entirely an affection of the glands of the head and throat, distinct from the lungs.

CURE—Take one ounce pulverized aloes, to one half ounce oil of sassafras, mix with a little flour to make it thick, and then make into balls the size of a black walnut, or the yolk of an egg—this quantity is for a dose. Open the mouth, pull out the tongue, put the ball on the roots of the tongue; this is the easiest way to give the medicine. A thick heavy blister should be drawn on the throat, and a mustard or fly poultice, to draw the inflammation to the surface. Bathe the limbs with *hot* water, and bandage them from the hoof to the knee; bathe three or four times a day. When he has a disposition to eat, give a mash of scalded wheat bran—two quarts twice a day. Give no hay or grain for three or four days; then if he breathes easy you can increase the feed. Keep the horse from the wind, and well blanketed.

DISTEMPER,

This is a disease that all colts are liable to; and, if taken in time, there will be no danger of swelling in the throat. This frequently causes thick wind. By distempers breaking in the throat, it becomes a callous where the opening in the throat was, then by checking the horse up there is not room for the wind, and he wheezes; but as soon as he stops, he breathes easy again. When this disease first makes its appearance, bleed freely from the neck vein; then give from a half to one pint of linseed oil, with three drachms of sassafras oil; this thins and purifies the blood.

NICKING.

There are two different modes of nicking; I will give the best and easiest. To make a horse carry an elegant tail is attended with some uncertainty. It much depends upon the spirit, disposition, form and vigor of the bone of the tail, &c., &c. A horse of good spirits, tolerable shape, and a small bone in the tail, can be made to carry an elegant tail with the greatest ease, particularly if he carries a tolerable natural tail; but a dull, leather-headed, flop-eared horse, with a remarkably large bone in the tail, will set you a task, although you may break the bone in two or three places. Indeed, there is so much difference in horses, that some judg-

ment must be exercised about the best mode to be adopted for the accomplishment of the object in view.

Nothing can more disfigure the appearance of a horse than to be half nicked. The form of the tail, when this unfortunately happens, departs from the simplicity of nature, and never attains the elegance of art.

I shall now proceed to the best method of nicking every description of horse, and which, if well attended to, will seldom or never fail to succeed. The horse should be confined in stocks fitted for that purpose. The tail then should be plaited up, and clubbed at the end, turned over a small stick, and securely tied with a string. Being provided with a knife made for that purpose, turn the tail up within a direct line with the back; commence the operation by making an incision about one inch from the rump close to the hair; cut the cords in one place on each side, leaving an incision only the size of the knife-blade; be very careful not to touch the bone with the knife, for if so, it would create inflammation, and the hair would come out. Great pains should be taken to have the weights equal, in order to keep the tail in a perpendicular direction, and prevent it from turning to either side during the time of healing, as a horse that carries his tail to one side, instead of being elegantly nicked, is ruined.

The horse many times carries a crooked tail before he has been nicked. To straighten the tail, cut the top cord—the under cord depresses the tail, and the top one raises it. When standing, the tail is straight; you will see at once that it is the top cord. In cutting the cord to straighten, cut the long cord, and the short cord will pass by on a lap, and grow together, leaving the tail as strong as ever. Pulling is not required in straightening the tail.

SCOURS.

This is a disease which requires no description—you will know it when it comes. It is the same as cholera in a man, but is very easy to manage. In a warm climate it is very dangerous, as two-thirds of the horses taken with it, die in three or four days.

CURE.—Boil red or white oak bark to a strong ooze; put two tablespoonfuls of cream of tartar, to one quart of this decoction; give to drink, or as a drench—then use the bark water for injection. Keep this up until the purging is stopped, then give a mash of scalded wheat bran twice a day. Give no hay or grain, or you will cause a relapse. He will

have a good appetite, but be very careful for several days, and when you commence feeding, feed very light. A positive cure.

BLIND STAGGERS.

The cause of this disease is too much food and water. In giving as much as a horse can eat, then give as much water as he will drink, in driving, the grain becomes swollen and the stomach distended by undigested food. The distention of the stomach prevents the passage of the blood, which causes it to flow to the head, and makes him crazy and blind. Sometimes he will fall back; at other times run, and is apt to run off from a bluff or against any object that may be in his way.

CURE.—If the disease is in its worst stages, split the skin of the forehead and fill with salt and black pepper; then, if you can get sassafras roots, boil to a tea; give one gallon twice a day, bleed one gallon from the neck vein. Feed light with bran mash; do not use any very hearty food for two weeks. This is a sure cure.

FOR WEAKNESS ACROSS THE LOINS.

This originates many times from a stoppage of water. It is not always what would be called gravel, it may be from contraction of the muscles across the loins. The more the horse strains, the more contraction it would cause. He becomes stiff, and it is difficult for him to move his hind parts.

CURE.—Give one ounce of pulverized aloes; one ounce sweet spirits of nitre; one ounce oil sassafras. Give this as one dose, after making into small balls. Then bathe the loins with hot pepper sauce. Blanket the horse well, putting several thicknesses over the loins. As soon as he can stand, give two quarts bran mash, with one tablespoonful of powdered rosin. Give this for two or three days, and keep the loins as warm as possible. Also use a liniment, origanum, two ounces; oil of sassafras, two ounces; spirits of turpentine, two ounces well mixed together, and bathe the loins twice a day.

STOCKED OR SWOLLEN LEGS.

This is caused by sudden heats and colds.

CURE.—Bathe the legs, from the hoof to the knee, in as hot water as he will bear, and then bandage them; the hot water opens the pores, and thins the blood, that has become thick, and will not circulate well. Make a strong tea of sassafras roots, and give it to drink. If not easily procured,

give, as a purge, one pint of linseed or castor oil, half an ounce of oil of sassafras. Feed light, give bran mash with one tablespoonful of cream tartar, for a few nights.

TO CURE HORSE DISTEMPER.

If the glands of the neck are not swollen much, give half of a three cent paper of smoking tobacco, morning and evening, in a warm bran mash, and give no hay, but a little fine cut straw, wet, with bran mixed in. If the glands of the neck are swollen, then apply a warm poultice made of wheat bran and hot vinegar, changing as often as the poultice gets dry, and be sure to get down all you can of flaxseed tea, or slippery elm tea will answer the same purpose; and let this be his constant drink. Be cautious to keep the horse from taking cold, in any way, and keep on a blanket, and thus you will save many a noble animal. Be cautious never to bleed your horse during the horse distemper, or physic him any more than what you will be able to do with the warm bran mash.

REMEDY FOR BOTS.

Which will remove them in a few days: Take of oil of turpentine; eight ounces; alcohol one quart; mix and bottle for use. Dose, five ounces in the horse's feed, once a day for eight days, and this will effectually remove the last vestige of the bots.

FOR INFLAMED SWELLINGS, OR LAME SHOULDER.

Equal parts oil of amber, oil of spike, camphor gum, ether.

TO CURE HEAVES.

Oil tar, 1 oz; oil amber 1 oz. Mix, and give 15 or 20 drops in feed, daily.

PHYSIC BALL.

Barbadoes aloes, 1 lb.; syrup buckthorn, 3 ozs, cod liver oil, 3 ozs.; melt the whole and stir till cold. In winter, add a little water; make into eighteen pills, and give one every four hours, or as much as will move the bowels.

DIURETIC DROPS.

That are reliable for stoppage of water, foul water, or inflammation of the kidneys, in all cases.

Take of sweet spirits of nitre, 4 ozs.; balsam copavia, 2

ozs.; oil juniper 2 ozs.; spirits turpentine 2 ozs.; gum camphor, pulverized, 1 oz; mix all together, and shake well; bottle and it is fit for use, for man or beast, under all circumstances where a diuretic is required.

DOSE:—For a horse, one ounce, in half a pint of milk once in six hours; for a man, one teaspoonful, in a tablespoonful of milk once in six hours. Be sure to shake the ingredients up well, before turning out for use.

COLIC.

This is caused by giving too much feed and water, or by watering often on the road. The water reduces the juices of the stomach, disabling digestion, and causing the grain to swell, generates a gas in the stomach, which, passing into the bowels, causes the acute pain of Colic. He becomes restive, lies down, rolls about and gives many signs of pain. Many times the horse has bots and colic at the same time, the only difference in the symptoms being that in colic the ears are cold, and in bots they are warm.

CURE.—Take one and a half ounces of laudanum, one ounce ether, two table spoonfuls soda, in half pint of warm water; give as a drench. Do not exercise the horse with this disease, as exercise causes the gases to move from one part of the bowels to another, each time causing pain; therefore keep him as quiet as possible.

FISTULA AND POLEVIL.

These diseases are both of the same nature, caused by a bruise, and the other part becomes swollen, and a mattery substance forms in the flesh; and, as the disease becomes seated, it fills in with pips and roots, and increases the inflammation. When, this disease first makes its appearance, it can be driven away by blistering, and drawing the inflammation to one point; but after it forms in roots, or pips, the only way of getting rid of it is to eat out or kill the roots of the disease.

The most effectual way of doing this is to take of euphorbium pulverized, one ounce; Spanish flies pulverized one half ounce; tincture of cantharides, one half ounce; iodine, one ounce; corrosive sublimate, one ounce; red precipitate, one ounce; white pine turpentine, one ounce and a half; lard, one ounce and a half. Melt the lard and turpentine together, and when it becomes blood warm, as it is cooling off, add the other articles. Use a large dish to mix them in, for when you put them together the mixture will foam; stir until cool · it is then ready for use. If the sore has not broken,

use it on the outside until you draw the disease to the surface. If it has broken—put the salve in the wound—it will eat out all of the diseased flesh. When you wish to heal the wound, wash clean with soap—then use as a salve, powdered rosin and honey—the best healing salve for horse flesh ever used.

SCRATCHES.

This is a disease that effects great injury to the horse, if not checked in time. In many cases the legs become swollen to the gambrel, and finally calloused so that it would be impossible ever to remove it; but, if taken in time, it will be easily managed

CURE.—First wash clean with soap and soft water; then take pulverized verdigris and sprinkle on the outside—this will kill the bad flesh. This must be repeated for several days until it has a healthy appearance: then wash, and it will heal.

There is another disease springing from the same, called Grease Heels. This will require something more powerful. Take the best potash pulverized; this will take the bad flesh off very fast; this should be applied until it has taken the diseased flesh off; then wash clean, and use rosin and honey as a salve. The horse should be thoroughly bled, and a pint of linseed oil, as a purge, should be given to cleanse the blood.

SCRATCHES, OTHER CURE FOR.

Hydrate of potasm, ten grains; pulvd nutgall, half ounce; white lead, half ounce; pulvd. opium quarter ounce; hog's lard quarter pound.

ANOTHER REMEDY.—One quart good vinegar; half pound litharge. Mix and simmer down to half the quantity; strain and apply.

CURE FOR WIND GALLS.

Olive oil, three ounces; nitric acid, one ounce. Rubbed in as much daily, or every second or third day, as it will bear without starting the hair.

CORNS, HOW TO CURE THEM.

Corns are generally caused by the shoe being worn too long. They appear in the angle of the hoof near the heel. Cut the corn well down, but not to the quick; fit the shoe so that it does not press upon the part. Then saturate well with pine sap or gum, which is found exhaling from pine

trees when cut. Fill the part nicely with tow, and put on the shoe, remembering that the shoes must be so fitted as not to oblige the part to support but very slightly, if any, the weight of the horse. Horses with corns must be oftener and more carefully shod than those free from them.

FOR KICKS, BRUISES, CUTS, OR SWOLLEN LEGS.

Bathe the swollen parts with hot water three times a day. As soon as you are through bathing bandage the leg, but not too tight. Take off the bandage every time you bathe. By using hot water it opens the pores, and leaves everything soft and pliable, entirely removes the swelling, and prevents it from becoming callused. If the cut is large, and a bad sore, use a salve made of pulverized resin and honey, which is the most healing of anything that can be used.

Horses that cut themselves by interfering, and the pastern becomes swollen and sore, bathe with hot water; it will keep it from enlarging, and will heal it up and leave the legs smooth. Liniments are very bad: usually they thicken the skin, and leave the parts affected, enlarged. But by bathing and bandaging it will leave the leg as smooth as before cut.

WEAK EYES.

There is no such disease as hooks—it is only caused by inflammation, which causes the washer of the eye to become swollen, and protrude out, and some say this is hooks—they never should be cut. By rowelling at the side of the eye, it will draw the inflammation from the eye to the surface, and cure the disease. Sometimes the eye becomes weak from wolf teeth; these should be knocked off; they will be found on the upper jaw. I would not advise the use of medicine in the eye—it will increase the inflammation.

SPRUNG KNEES AND SPRING HALT.

These diseases are both from one cause; it is contraction of the muscle, caused by a strain, bruise or by long standing. Stringhalt comes from these causes; sprung knee is invariably caused by a strain, which contracts the muscle of the arm; by the contraction of the muscle it draws the cords, and causes the knees to get weak and crooked. The cords are swollen, which causes persons to doctor the cords; this will do no good; for it is impossible to relax a cord; in fact, the cord itself is not contracted; it is the contraction of the muscle which draws the cords so. By relaxing the muscle, it would drop the cords to their proper places, and give relief. Stringhalt is the same, it is the contraction of the

inside muscle of the thighs. By relaxing the muscle you cure the disease.

CURE.—Take the common land turtle, and try them down and use the oil by rubbing on the muscle; this will relax and cure the disease.

BLISTERING.

The most effectual blister is to make a blister ointment, as follows; one drachm of flies, one drachm of resins, four ounces of lard. Melt the resin and lard together, then add the flies. Rub the parts with the hands until you create a heat, then apply the blister. This is good for strain in the pastern.

The best liquid blister is cantharides and turpentine—equal parts.

THUMPS IN THE HORSE.

This disease is caused by too much feed and water, and fast driving. By filling the stomach with food and water, then driving fast, the stomach becomes distended with undigested food, which prevents the inflating of the lungs; the muscles of the lungs become sore and weak, and cause them to thump. If this disease is of long standing it will be incurable; but by a moderate quantity of water, and a reasonable quantity of grain, you will prevent this disease. It is brought on entirely by heavy feeding and watering with fast driving.

BIG HEAD AND BIG JAW.

These diseases are something the same as Spavin; the bony substances form a deposit, and become ossified. Whilst this disease is in a gristly substance, it can be cured; but after it becomes ossified it will be incurable.

CURE.—Two ounces gum euphorbium fine; one ounce Spanish flies fine; two ounces corrosive sublimate; two ounces iodine; three ounces white pine turpentine; three ounces lard. Melt the lard and turpentine together; then add the others. This, if a cure is possible, will effect it. The horse should be kept dry, and not fed very hearty. Use bran mashes, with one table spoonful of sulphur, two tea spoonfuls of saltpetre, twice a week; give one pint of linseed oil the first week. This will be all you can do.

CRIBBING.

This disease originates from a sour stomach. First caused

by habit in biting the crib whilst eating, and in so doing the horse swallows wind, which causes the stomach to become sour. Over eating and drinking would aid in this disease. A horse with this disease is the same as a person that belches, and in the end the same as a dyspeptic.

CURE.—Take one table spoonful of pulverized charcoal; one table spoonful of sal soda, three times a week until a cure is effected. The horse should be fastened in some place where he cannot get hold of anything to bite. Fasten in the middle of the floor, and feed him from a basket, fastened on the head. By this he will forget the habit of biting his trough, and the disease will be effectually cured.

CURE FOR FOOT ROT IN SHEEP.

Take two pounds of blue vitrol; three-fourths of a pound of verdigris; one pint of spirits of turpentine; four quarts of chamber ley; simmer well together, take all the sheep, pare the foot so as to be sure to get all the infection out, then stand them in this so as to have it cover the feet. Repeat this two or three times, and a cure will be effected.

CARE FOR HORN AIL OR HOLLOW HORN.

This disorder usually attacks cattle in the Spring, after a severe winter; likewise those that are in poor flesh, or those that have been overworked and exposed to severe storms, or reduced by other diseases, are pre-disposed to take it. Symptoms—eyes dull, discharging yellow matter, dizziness, loss of appetite, shaking of the head, bloody urine, coldness of the horns, stupidity, and great debility. CURE.—Split the tail up two or three inches, take one quarter pound of black pepper, and a handful of fine salt, and bind on the tail. This is a sure cure.

TO RECRUIT A HORSE, HIDE BOUND OR OTHERWISE OUT OF SORTS.

Nitrate potasia (or saltpetre), four ounces; crude antimony, one ounce; sulphur, three ounces. Nitrate of potasia and antimony should be finely pulverized, then add the sulphur, and mix the whole well together. Dose, a tablespoonful of the mixture in a bran mash daily.

MAGIC LINIMENT.

Two ounces, oil spike; two ounces, origunum; two ounces of hemlock; two ounces of wormwood; four ounces of sweet oil; two ounces spirits ammonia; two ounces of gum cam-

phor; two ounces spirits of turpentine, and one quart of proof spirits; nine per. cent. Mix well together and bottle tight. For sprains, bruises, lameness, etc., this liniment is unsurpassed and originally cost, (what it is really worth) one hundred dollars. This is the same liniment without the turpentine, which has achieved such wonderful cures for human ailments. For domestic purposes it is invaluable.

LINIMENT FOR OPEN WOUNDS.

Sulphate of copper (copperas) one ounce; white vitriol two ounces; mixture of soda (salt) two ounces; oil linseed, two ounces; Orleans molasses, eight ounces; boil over a slow fire fifteen minutes, in a pint of wine, all of the above ingredients. When nearly cold, add one ounce of oil vitriol and four ounces spirits turpentine, and bottle for use. Apply it to the wound with a quill, which will soon set the wound to discharging, and perform a cure in a few days. Be careful to keep the wound covered, either by bandage or a plaster. Should be applied once or twice a day, until it discharges freely.

SIMPLE LINIMENT.

Put into spirits of turpentine, all the camphor gum it will cut, when for ordinary purposes it is fit for use; but if designed to reduce pain, add as much laudanum as there is turpentine. This liniment is as good as it is simple.

COUGH POWDERS.

Camphor, one ounce; tartar emetic, one ounce; nitrate potasia, two ounces, and digitails, one drachm, if you choose.

CONDITION POWDERS.

One pound ginger; one ounce anise seed, pulvd; one ounce fenegreek seed; two ounces ginseng root, pulvd.; one ounce seed of sumac berries pulvd.; one ounce antimony. Mix it with a pound of brown sugar. Excellent for coughs, colds, or to give a horse an appetite.

HOW HORSES CAN BE TAUGHT TO PERFORM CERTAIN TRICKS.

The readers of our present work, many of them, may desire to learn something of the mode of teaching horses such tricks as they may be able to accomplish. It well gratify the patrons of our book, therefore, if we afford them such information on this head, as will prove interesting and useful, recommending or promising that no horse should have more

than one or two lessons per diem of not less than a half nor exceeding three-quarters of an hour in length.

HOW TO MAKE A "BOW."

Take a pin in your right hand, between the thumb and forefinger, and stand before, but a little to the left of your horse. Then prick him on the breast very lightly, as if a fly biting, which to relieve he will bring down his head, which you will accept as yes, and for which you will reward in the usual manner by caressing and feeding. Then repeat, and so continue until he bring the head down the moment he sees the least motion of your hand toward his breast, or substitute some signal which he will understand readily.

HOW TO SAY "NO."

Stand by your horse near the shoulder, holding the same pin in your hand, with which prick him lightly on the withers, and to drive which away he will shake his head. You then caress as before, and so repeating, until he will shake his head at the least indication of your touching him with a pin. You can train your horse so nicely in this way in a short time as to cause him to shake his head or bow by merely turning the hand a little, or moving it slightly towards him.

HOW TO TEACH YOUR HORSE TO KISS YOU.

Teach him first to take an apple out of your hand. When gradually raise the hand nearer the mouth, at each repetition until you require him to take it from your mouth, holding it with the hand, telling him at the same time to kiss you. He will soon learn to reach his nose up to your mouth; first, to get his apple, but finally because commanded to do so. Simply repeat until he understands the trick thoroughly.

HOW TO SHAKE HANDS.

Tie a short strap or piece of cord, to the forward foot below the fetlock. Stand directly behind the horse, holding the end of this strap or cord in your hand, then say, "shake hands, sir," and immediately after commanding him to do so, pull upon the strap, which will bring his foot forward, and which you are to accept as shaking hands, thanking him for it by caressing, feeding, etc. By a little practice a horse may be easily trained to approach, make a bow, shake hands and follow like a dog, lie down, sit up, etc.

HOW TO SIT UP.

When your horse will lie down readily, you can then teach him to sit up like a dog, easily. If young, and not

very heavy and strong, you can easily prevent his getting up without tying down. First cause him to lie down, having on him, a common bridle, with the reins over the neck, then step behind him and place the right foot firmly upon the tail, the reins in your hands. Then say, "Get up, sir."

Your standing on his tail will prevent his raising any further than on his fore-feet. Repeat a few times, use good judgment, caress, reward, etc., and you will soon have the trick taught perfectly.

A very large number of recipes in this book have been collected at an unusual cost. They have all been obtained from the most reliable sources, and they are presented with the hope that their great importance and true value, will be fully appreciated.

It should invariably be kept in view by all owners of horses, that it is far more easy to keep them in good health, than to cure them from disease. Avoid overwork and exposuse, exercise no excess of authority over them, and endeavor to keep them in good condition, this will be found far more easy and agreeable to do than to have to doctor and perhaps lose them.

Various Methods of Making Money.

In commencing the manufacture of articles from any of the following Recipes, it will be necessary for the manufacturer to employ agents to travel and sell. The materials for making the articles can be obtained at any Drug Store. These Recipes have been secured for the benefit of those out of employment, and for those who wish to change their occupation for something lighter and more lucrative.

TO MAKE FIRE-PROOF PAINT.

Take a sufficient quantity of water for use; add as much potash as can be dissolved therein. When the water will dissolve no more potash, stir into the solution, first, a quantity of flour paste, of the consistency of painter's size; second, a sufficiency of pure clay to render it of the consistency of cream. Apply with a painter's brush.

The above will admit of any coloring you please.

PREMIUM BLACK WRITING INK.

Take two ounces extract logwood; one gallon soft water; boil slightly, or simmer in an iron vessel fifteen minutes; dissolve in a little hot water twenty-four grains Bychromate of Potash, twelve grains Prussiate of Potash, and stir into the liquid a few minutes while over the fire; take off, and when settled, strain it twice through common muslin or sheeting cloth. The above Ink is a jet black from the first, flows beautifully from the pen, and is so indellible that even Oxalic Acid will not remove it from paper, and costs, when made in large quantities, only four cents per gallon.

MAGIC COPYING PAPER.

To make black paper, lampblack, mixed with cold lard; Red paper, Venetian Red mixed with lard; Green paper, Chrome Green mixed with lard; Blue paper, Prussian Blue, mixed with lard. The above ingredients to be mixed to the consistency of thick paste, and to be applied to the paper with a rag. Then take a flannel rag and rub till all color ceases coming off. Cut your sheets four inches wide, and six inches long, put four sheets together, one of each color, and sell for twenty-five cents per package. The first cost will not be over three cents.

Directions for writing:—Lay down your paper upon which you wish to write; then lay on the copying paper, and over this lay any scrap of paper you choose; then take any hard pointed substance and write as you would with pen.

A PURE VEGETABLE SALVE.

One pound lard; one half ounce rosin, and ten ounces elder bark. Boil these over a slow fire for about half an hour then strain and put into small bottles, which sell for a shilling each.

PATENT GOLD AND SILVER COUNTERFEIT DETECTOR.

Take one ounce nitrate of silver, pure crystals, and one quart of pure rain water. Add together, shake well, and it is fit for use. To be put up in drachm vials, and sold for twenty-five cents per vial.

ART OF PAINTING ON GLASS.

The only difference between ordinary painting and painting on glass, is that in the latter all transparent colors are used, instead of opaque ones, and the colors being ground up with turpentine and varnish instead of oil. In painting upon glass, it is necessary, occasionally, to place the picture between the artist and the light, to enable the artist to see the effect, the light having the property of casting a yellowish

tinge upon all colors so exposed. This art is easily learned, and affords a handsome remuneration.

A USEFUL, EASY AND LUCRATIVE EMPLOYMENT.

You establish a General Commission Office. To make it plain requires some explanation. We will suppose you reside in a part of the country where there are large farming districts, villages, and perhaps a city or so. About you are thousands of farmers, hundreds of mechanics, artists, etc. These all have wants; they either want to sell, or want to buy, or both.

Example:—Mr. A. wants to sell a pair of oxen, 6 cows, some corn, wheat, etc. Mr. B. who lives three miles distant, wants to buy a pair of oxen, cows, etc. C. has two hundred cords of wood, and a heavy wagon for sale. D., who is a lumber man, would like to find about two hundred cords of wood, and wants immediately a heavy wagon. Farmer E. wishes to engage two good hands for the season. James and John are out of employment, they want work, but can't find any. Charles is a smart lad, Mary is a strong, tidy young woman, Henry a gardner, and they all want places. There are many families who want just such help, but it so happens that these persons don't know of each other's wants. Now, it is to supply these and similar wants, that you establish your business—a trading correspondence to meet individual and public wants, in the line referred to.

It might be said that these people supply their own wants. This they could do, provided they at all times knew how, or where to have them met. Here is the point of your business—to aid in supplying their wants.

Example:—Last Spring, farmer A., wanted a pair of oxen. It was late in the Spring, and the corn ground must be broken. He had but one horse, and oxen he must have at any rate, if he could but find any for sale. Here was the difficulty, for he had already spent four days in a vain search although other work required his attention at home. Well, it so happened that Mr. B., a neighbor not far off, had oxen, cows, etc., and being nearly out of hay, must sell some of his stock. He could do all his work with his horses—his cows would soon be profitable—the oxen must be sold, and that too, quickly. He had been round nearly a week, trying to sell, but found no customers. Now, John, who is something of a Yankee, happened to know of both these wants, and says to Mr. B., "How much do you want for your oxen?" B. answers, "If you will find a customer for them this week, you may have all over one hundred and ten dollars, they may

bring. They will readily sell for one hundred and twenty dollars, which is my price." So John rode over to Mr. A., and asked him how much would he give to know where he could get just such oxen as he wanted. Mr. A. says; "As my work must be done, if you can refer me to a pair to suit, at a reasonable price, I will give you five dollars." John sent him over the hill, and in less than two hours, Mr. A. was in his field plowing. Thus it is: they all have wants—and often very urgent ones—and their own interest would prompt them to pay for a means to supply them. Your business is a system of means and convenience for all such wants, for such they pay you whatever you see fit to charge.

The manner of it may be as follows:—You select a room for an office. Provide yourself with two blank books, suitably ruled. One of your books is marked, "WANTED TO SELL," the other, "WANTED TO BUY." Mr. A. comes to your office. He wants to sell six bushels of seed wheat, one horse, eight cows and a wagon. You note them in your first book, thus: "Mr. A., residing ——, has for sale seed wheat, (he has left a specimen,) one bay horse, six years old, sound and kind, eight choice cows, one light spring wagon." Mr. B. comes and wants to sell or buy, (as the case may be,) and you note accordingly. Now, for every entrance on your books you charge, say fifty cents, and should you be disposed to effect sales, you can also charge, say five per cent. Thus: A. has a pair of horses, and a lot of seed rye, worth two hundred dollars; you effect a sale, and your percentage, with the fees, would amount to $10.50. All the outlay you need incur, is the rent, (if you hire,) which need not be more than $10 a year, and for calling public attention, through one or more papers nearest to you, to your business.

The above is a general outline of the business; the details you can arrange to suit your interest, convenience, etc.

THE CELEBRATED CHEMICAL COMPOUND.

Take one pint alcohol, two gills nitrous spirits ether, two ounces bychromate potash, two ounces powdered cinnamon, and one ounce aqua fortis. Mix all the above together and let it stand twenty-four hours, and it is fit for use. Bottle in two ounce vials, and sell for twenty-five cents. To extract Grease, Stains, etc., from cloth, saturate with cold water, dip a sponge in the liquid, and apply it, and repeat if necessary, and wash off with cold water.

THE HUNTER'S SECRET.

Take half pound strained honey, quarter drachm musk, three drachms oil lavender, and four pounds tallow. Mix all

together, and make into forty pills; one pill to be placed under the pan of the trap when setting it.

TO MAKE SOFT SOAP.

Take ten pounds of common yellow or rosin soap; six pounds sal soda, and ten or twelve gallons of soft or rain water. Cut the soap into small pieces, and put the whole over a fire; bring the water nearly to a boiling point, and allow it to remain at that temperature until the soap is entirely dissolved. It may then be taken off, and when cooled, it will become thick and livery. The soap made with these proportions will be found to be too strong, and cold soft water can be added until it becomes of the proper consistency and strength.

PATENT STARCH POLISH.

Take Common dry potato or wheat starch, sufficient to make a pint of starch when boiled. When boiling, add half drachm spermaceti, and half drachm white wax; then use it as common starch, only using the iron as hot as possible.

RECIPE FOR MAKING WESTERN CIDER.

To one pound of Sugar (or Molasses) add one-third ounce tartar acid, two table spoonfulls of good yeast—dissolve the sugar in one quart of warm water, put all in a gallon jug, shake it well, and then fill the jug with pure cold water,—let it stand uncorked twelve hours, and it is fit for use. This gives the proportions per gallon; if made in barrel or keg, keep the bung out until it ferments. If it becomes too sour to drink, it will be the best of *Vinegar*. If made in cold weather, keep it in a warm room until it is fit for use.

RHEUMATIC LINIMENT.

Oil of sassafras, two ounces; oil of hemlock, oil of cedar, oil of turpentine, of each one ounce; gum camphor and capsicum, of each one ounce; and add two quarts of alcohol, shake well together. Rub in with the hand or a flannel rag.

INDIAN PILLS.

Aloes, three ounces; gamboge, one ounce; castile soap one ounce; extract gentian two ounces; mix the articles before adding the extract; then make it into a mass, add water if the extract is not soft enough. While working it up, add by degrees one drachm oil of peppermint. Make pills of common size.

BEAUTIFUL BRIGHT RED INK

Cochineal two ounces, bruised; pour over it one quart of

boiling water and let it stand. Boil two ounces brazil wood in one pint of soft water, for half an hour, and in twenty-four hours mix the two together. Dissolve half ounce gum arabic in a pint of hot water, and when cool,add to the other, stir well, and then strain it through muslin.

SUPERIOR BLUE INK.

Prussian blue six parts, oxalic acid one part, triturate with a little water to a perfectly smooth paste, and dilute with the proper quantity of water. Add gum arabic.

INDELIBLE INK FOR MARKING LINEN WITHOUT PREPARATION.

Nitrate of silver one and a half ounces, dissolved in six ounces liquor ammonia fortis, orchill for coloring, one ounce, gum mucilage twelve ounces. The best extant.

LUMINOUS INK—SHINES IN THE DARK.

Phosphorus, half drachm; oil cinnamon, half ounce; mix in vial, cork tightly, heat it slowly until mixed. A letter written with this ink can only be read in a dark room, when the writing will have the appearance of fire.

RED RULING INK.

Best carmine, four grains; rain water, one ounce; aqua ammonia, forty drops. A little gum arabic water may be added.

YELLOW INK.

A little alum, added to saffron, in soft hot water, makes a beautiful yellow ink.

INVISIBLE INK.

Sulphuric acid, one part; water, twenty parts; mix together and write with a quill pen, which writing can be read only after heating it.

SUPERIOR WATER-PROOF COMPOSITION FOR LEATHER.

Boiled oil, sixteen parts, spirits turpentine, two parts, beeswax and rosin one part each, Venice turpentine two parts; mix and use hot.

GUNPOWDER.

Nitre, seventy-six parts; Charcoal, fourteen parts; sulphur ten parts; mix.

SHAVING SOAP.

Take four and a half pounds white bar soap, one quart rain water, one gill beef's gall, add one gill spirits turpentine; cut the soap thin and boil five minutes; stir while

boiling, and color with half ounce vermillion: scent with oil of rose or almond.

HARD SOLDER.

Copper two parts, melt and add tin, one part.

SOFT SOLDER.

Tin two parts, lead one part; melt.

SILVER PLATING FLUID.

Dissolve one ounce of nitrate of silver in crystal, in twelve ounces of soft water. Then dissolve in the water two ounces cyanuret of potash. Shake the whole together and let it stand till it becomes clear. Have ready some half ounce vials, and fill them half full paris white or fine whiting; and then fill up the bottle with the liquor, and it is ready for use. The whiting does not increase the coating power, it only helps to clean the articles, and to save the silver fluid by half filling the bottles.

GREAT PAIN-EXTRACTOR.

Spirits of Ammonia, one ounce; laudanum, one ounce; oil origanum, one ounce; mutton tallow, half ounce; combine the articles with the tallow, when it is nearly cool.

MATCHES.

The ends of the tapers, or wood, should be very dry, and then dipped in hot melted sulphur, and laid aside to dry. Then take four parts of glue, dissolve it, and when hot add one part of phosphorus, and stir in a few spoonfuls of fine whiting, to bring it to the proper thickness.

OIL PASTE BLACKING.

Take oil of vitriol, two ounces; ivory black, one pound; molasses, five ounces: tanner's oil, five ounces; mix the vitirol and oil together, and let it stand a day; then add the ivory black and molasses, and stir it well together till it makes a thick paste.

TO PRESERVE METALS FROM RUST.

Take some melted beeswax and rub it over the article to be preserved. When dry, warm the article again, so as to get off the wax, and rub it with a cloth until the former polish is restored. By this means all the pores of the metal are filled up without injury to the appearance, and rust will not attack it, unless very carelessly exposed to constant humidity.

BLACK AND RED SEALING WAX.

Rosin, beeswax, pitch and ivory black, melt together, and

while warm, dip your bottle and set aside to cool. For red, use english red.

COLOGNE WATER.

One ounce each of oil rosemary, of jessamine, and oil bergamot, ten drops otto rose, to a gallon proof spirits—mix.

HAIR RESTORATIVE.

Take one ounce palmachrista oil, add oil of lavender to scent it; let it be well brushed into the hair twice a day, for two months. An excellent oil.

CURLING LIQUID FOR THE HAIR.

Take two ounces of scrapings of lead, quarter of an ounce litharge of gold, one drachm camphor; boil the whole in a pint of soft water for half an hour; when cold, pour off the liquid, and add to it a drachm of the sugar of lead, and a drachm of rosemary flowers; boil these up together, and strain off the liquid, when it is fit for use.

CELEBRATED TOOTHPOWDER.

Prepared chalk, four ounces; alum, two drachms; cream tartar two ounces; white sugar, one ounce; orris, one and a half ounces—mix.

COUGH SYRUP.

Take thirty drops of laudanum, twenty-five drops of ipecacuanha wine, and mix with a desert spoonful each of vinegar and honey for a dose.

UNIVERSAL LINIMENT.

Take one fluid ounce tincture of opium, and one fluid drachm tincture of iodine—mix.

SUPERIOR PAINT FOR BRICK HOUSES.

To lime whitewash, add for a fastener sulphate of zinc, and shade with any color you choose; for yellow paint, add yellow ochre; for red, add Venetian red, etc.

PAINT FOR ROUGH WOOD-WORK.

Six pounds melted pitch, one pint of linseed oil, and one pound of yellow ochre.

BEST VARNISH.

White wax, fifteen ounces; yellow rosin, one ounce, powdered; turpentine, one quart; simmer till dissolved; apply with a cloth, and polish well with a clean piece of woolen.

LEATHER VARNISH.

Boiled oil, thirty-two parts; spirits of turpentine, four

parts; beeswax, two parts; rosin, two parts; venice turpentine, two parts; mix and use while hot.

ALMOND SOAP.

Best white tallow soap, fifty pounds; essence of bitter almonds, 20 ounces; melt by the aid of a steam or water bath.

FANCY SOAP.

Dissolve two ounces of venice soap in two ounces of lemon juice; add one ounce of oil of almonds and one ounce oil of tartar, mix and stir it till it has acquired the consistency of honey.

BUFFALO OIL.

Take the best lard oil, and perfume it well with equal parts of oil garden lavender and oil lemon.

MACCASSAR OIL.

Olive oil, one pound; oil origanum, one drachm; oil rosemary, one scruple—mix.

MAGNETIC OINTMENT.

Elder bark, spikenard and yellow dock roots, of each one pound; boil in two gallons of water down to one; then press the strength out of the roots and boil the liquid down to half a gallon; add eight pounds of the best rosin, one pound of beeswax, and tallow enough to soften. Roll into rolls, and apply by warming and spreading on linen.

LAVENDER PERFUMED WATER.

Two ounces oil garden lavender, one drachm essence ambergris, six drachms oil bergamot. Mix with two quarts and a pint proof spirits.

FLORIDA WATER.

Half pint proof spirits, two drachms oil lemon, half drachm oil rosemary—mix.

NON-EXPLOSIVE BURNING FLUID.

Take five quarts alcohol, one quart camphene, and two ounces pulverized alum; mix, and let it stand twenty-four hours. If transparent, it is fit for use; if not add sufficient alcohol to bring it to the natural color of the alcohol. The cover of the lamp must fit close, and a tin stopper be kept over the tube, when not in use, to prevent evaporation.

STIMULATORS FOR BALD HEADS AND BARE FACES.

Tincture hartshorn, one ounce; borax, one-half ounce; alcohol, one pint; water, one pint; tincture cantharides, two drachms.

Graham's.—Cologne, two ounces; liquid hartshorn, one drachm; tincture cantharides, two drachms; oil rosemary, twelve drops; oil nutmeg, twelve drops; oil lavender, twelve drops.

To The Reader—In Conclusion.

In as much as this little volume is destined to have a most extensive sale and to become a book of guide and reference to many thousands of farmers and others throughout the broad lands of the Universe, before closing the last page of the work, I deem it to be my duty not to neglect earnestly to warn and caution all my country friends and others of the great danger of remitting money in letters to New York city to unknown parties who are continually flooding the country with circulars offering great and extraordinary inducements for the investment of money in accordance with such circulars. Many of the circulars mentioned are from swindling concerns who receive the remittances from inexperienced persons and yet deny their having done so, and never send the goods promised therefor, or if they admit the receipt of the money they will declare they have sent the goods as ordered and paid for. This, to those who think from the fact that they are honest themselves that every one else must be so, may be startling news, nevertheless it is true that this city contains some men whose morals have become so depraved as to render them unfit members of society, a disgrace to the community, and total strangers to truth and justice.

Our country friends, therefore, wishing anything from this city, will wisely have all money letters registered, or send money orders, and even then avoid sending money to strangers of whose responsibility, character and standing they know nothing, and remit to some friend or person with whom they may have had dealings and who may be known to them as responsible, requesting them to make the purchase. To those who have no friends here or parties with whom they can entrust their orders, we stand ready and willing at all times to lend a helping hand. By our being centrally located in the most business part of the city we can often do many favors for our correspondents, with the assistance we have, without much inconvenience to ourselves. A stamp must be enclosed in all cases where an answer is required.

We did not intend that this book should in any way serve as an advertising medium, but through urgent solicitation, we have been induced to accept a few cards or advertisements from parties with whom we are perfectly well acquainted and whom we know to be upright, fair dealing and responsible. These we conscientiously recommend as worthy of public patronage.

Tricks for Horse Jockeys.

IT WILL BE OBSERVED that I have freely given throughout this entire work of Rare Recipes and other Valuable Information. It would afford me pleasure to continue and reveal the secrets of these tricks also, if I was satisfied in my own mind that in so doing I would be benefitting the community at large. It is reasonable to suppose, however, from their very nature, that the owner of the horse "treated," will in all cases be the loser, and that the person possessing the "method" will be a great gainer. Such being the case, I consider it not only right and proper, but my duty, to make a small charge for the Tricks, by which I may realize a trifle toward compensating for the vast amount of study, research and experiments necessary to bring them to their present state of perfection.

☞ *How to Make a Foundered and Spavined Horse go off Limber.* Price One Dollar.

☞ *How to Make Old Horses Appear Young.* Price One Dollar.

☞ *How to Make a Horse Appear as if Foundered.* Price One Dollar.

☞ *How to Make a Horse Fleshy in a Short Time.* Price One Dollar.

☞ *How to Make a Horse Stand by his Feed and Not Eat It.* Price One Dollar.

☞ *How to Make a True-Pulling Horse Baulk.* Price One Dollar.

☞ *How to Stop Blood Instantly in All Cases.* Price One Dollar.

☞ *How to Make a Horse appear as if he had the Glanders.* Price One Dollar.

All the above Tricks will be sent to any address for $5, or $1 each for a single one. They are sold with the express understanding that they shall be used by the person purchasing only, and that they shall not under any circumstances be revealed by him, either directly or indirectly. They are warranted to never fail. Address,

J. W. STEPHENS,
No. 37 Park Row, New York.

Another Method.

By the methods given for Training, Educating, and Subduing Horses in this work, no Medicines are used. Some Trainers seem to think they must have Powders, Oils, &c., but we have never found it necessary. However, as we frequently have orders for them, we keep on hand, prepared, the Best Preparation there is of this kind; and can send it to all who wish for Three Dollars a Package.

The Beautiful Art of Chinese Chronotype;

OR, IMPROVED

Photochromatic Oil Painting.

This is a New Style of LANDSCAPE PAINTING, executed by a chemical process of producing an impression on glass, from landscape views, wood cuts, or lithographic prints. By this process we obtain a full impression of the outlines on the glass as perfect as they are in the original. They are then colored and shaded by a new process without the use of paints or brushes, and when finished are fine specimens of art, which for boldness of outline, soft blending of colors, and rich shading of background will rival the most costly oil paintings. This method of coloring has all the effect of oil paints, giving the glass the appearance of canvass; and so closely do they imitate an oil painting that they will deceive the best judges. The art of landscape painting is considered by almost every person, especially by ladies, to be an accomplishment worth spending some time to acquire. But most kinds require so much practice, that few persons can afford to spend the time necessary to become proficient in the art; in this respect our photochromatic painting is superior to any other, as it requires but a few hours' practice to enable any person to execute a good picture.

We have printed instructions for doing this painting, by the aid of which any person can, in a few hours' time, execute a good picture without the aid of a teacher. The whole process is so simple, that it can be understood and practiced by any person of ordinary ability. Even children, not over twelve years of age have learned it, and been able to execute some very good specimens. The chemicals and all other materials used cost but a mere trifle, and can be obtained at any drug store.

These instructions would be cheap at from $3 to $5 each; but in view of the limited circumstances of many, we have, in order to place them within the reach of all, reduced the price to 50 cents a copy. To Agents we furnish these instructions complete for $1.50 per dozen. Persons sending 50 cents for a single copy, and afterwards taking an agency, will have the 50 cents allowed on their order. Address,

J. W. STEPHENS,

No. 37 Park Row, New York.

Watches and Jewelry.

PROBABLY three-fourths of the swindling carried on by mail, in this and other cities, can be traced to the golden bait furnished by Jewelry. We shall not refer to the *modus operandi* here, but simply point out a way by which all may avoid imposition. Our friends will always find it to their interest in purchasing jewelry to go to a first class house and pay a fair price for a good article. This rule holds true for all the wants of life----the best will generally be found the cheapest in the end.

In view of the demand for, and difficulty in obtaining Watches and Jewelry in the country, we have, for the benefit of our Customers who may want anything in that line, made arrangements with a first class Importing and Manufacturing House on Broadway, whereby we can furnish Watches much cheaper than they can be purchased of your Watchmaker, even if you reside in a city, for at retail they charge the enormous profit of from *fifty to one hundred per cent*, while we get the goods at the regular wholesale trade price, and charge only ten per cent for our profit and trouble, which is included in the prices given in the following list of goods:

English Watches at Gold Prices.

Gold, Open Face, English Levers,	$45	to $65	in gold.
" Hunting " "	70	to 90	"
" " " finer quality	90	to 110	"
" " " best makers, in extra heavy 18 karat cases, richly engraved and enamelled,	110	to 135	"
Gold, Magic Cased, English Levers, extra heavy, 16 to 18 karat case,	140	to 170	"
Silver, Open Face, English Levers,	20	to 25	"
" Hunting,	25	to 40	"
" " " finer qualities	50	to 75	"

Swiss Watches at Gold Prices.

Gold, Hunting Cylinders (ladies' size), at	$25	to $35	in gold.
Gold, Open Face, Ancre Levers, at	25	to 35	"
" Hunting " "	45	to 60	"
" " " extra fine quality of case and movement	60	to 70	"
Gold, Open Face, Ancre Lever, double time, independent second, Compensating Balance, 18 karat case	60	to 65	"
The same movement in Gold Hunting, 18 karat case	110	to 135	"
Gold, Hunting, Ancre Levers (ladies' size)	40	to 50	"
Gold, Hunting, Ancre Levers, (ladies' size) celebrated makers, richly engraved, enameled, and diamond set	70	to 85	"

Silver Hunting Cylinder Watches, etc, at Gold Prices.

Gilt, Hunting Cylinders . . .	$6 50 to $7 50 in gold.
Silvered, " "	6 50 to 7 50 "
" " Ancre Levers, .	8 00 to 9 00 "
Silver Hunting Cylinders . . .	9 00 to 10 00 "
" " Ancre Levers, $10, $11,	12 00 to 13 00 "
" " Ancre Levers, finer qualities,	12 00 to 18 00 "
Gilt, on Silver, Open Face Cylinders,	6 00 to 8 00 "
" " Hunting, Ancre Levers, fine quality, ...	14 00 to 18 50 "

Patent Gold Plated or Filled Case Watches at Currency Prices.

Patent Gold Plated or Filled Hunting Case, with Ancre Lever Movement, (ladies' and gents' sizes)---according to size and quality of movement . .	$45 to 55
The same style of case with English Lever Movement, according to quality of movement .	65 to 75
The same style of Case with American Lever Movement ---according to quality of movement . . .	56 to 65

We desire to draw your attention to the FILLED OR PATENT GOLD PLATED CASES, mentioned above. They are intended to supercede the low karat cases now in use, and which all the Trade know will not retain their color in warm weather. The patent plated case is made by sweating or plating a bar of 16 or 18 karat gold on each side of a bar of composition, which is rolled down to the required thickness; from it the cases are made by *patented* machinery, which forms the case without removing any of the gold from the outside, it being plated sufficiently thick to admit of engine turning and engraving without cutting through the fine gold. These cases will wear equal to the finest solid ones *for at least one generation*, and on melting they will be found to have *an equal value of gold with the eight* karat, solid case, as now made; and they possess the great superiority of having *all the gold, where it is wanted, on the outside.* It will be observed that these cases are of uniform thickness. The centres are of one piece and consequently much stronger than when soldered; and the machinery, by which they are made, also stiffens and strengthens them far better than any low karat cases ever made.

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To the Married, or Those About to Marry.

During an extensive practice of several years, I have found one of the most fruitful sources of disease to be the various modes resorted to by married people to prevent a too rapid increase of offspring. The country is flooded with quack nostrums, injurious and unreliable "recipes," &c., all of which have been produced, of course, because there is an actual demand for some reliable prevention; and it is a matter of not much doubt in my mind that the health of married females has been quite as much deteriorated by their use, as it would have been had they actually given birth to a child as often as once in fourteen months or two years. But the female has not alone suffered through their use, for that which is injurious to one of the sexes, under such circumstances, is invariably detrimental to both.

Prevention pills, taken internally by the female, tend to weaken the muscular fibres of the womb, and, if successful as a prevention, in a very short time produce obdurate barrenness; then "female weakness" necessarily follow, when purulent and excoriating fluids are exuded from the internal membranes, and the male, at each copulation, becomes innoculated with the virus, by which the powers of his generative organs are debilitated, or absolutely destroyed. Many will appreciate the truthfulness of this remark under the incentive of sad experience.

The use of caustic washes as injections produces the same results, though more rapidly; and many a lady who is suffering under the most aggravated forms of leucorrhea can trace its origin directly to its application.

The use of water, as an injection, has met the approval of some, but it is by no means reliable, and fails eighty cases in a hundred; besides, the frequent application of cold water to the vagina, in a little while deadens the sensitiveness of the female sexual organs, from which arises a disinclination for sexual intercourse.

A more common mode of prevention is resorted to by the male and is usually termed "withdrawing." This practise is more disastrous to health than all the rest, because its effects are developed so gradually that neither the male nor the female is really aware of its injurious tendency until their systems are shattered to a frightful extent, and not even then, unless they are somewhat acquainted with the teachings of physiology. To both sexes it is little better than self-pollution. In a natural and full intercourse *electricity*, individual, chemical, and frictional, is evolved, and it is the action of this wonderful agent on the delicate nerves centreing on the sexual parts which produces the pleasurable sensations; and it is at the moment the discharge of the seminal fluids take place that a quieting equilibrium is restored between the parties, by which the agitated nervous sys-

tems of both are recompensed for the excitement which they have undergone.

There are many other pernicious practices resorted to, but those I have briefly considered are the most common. That a harmless and sure prevention, in the hands of only medical men and the married, must conduce to the health and happiness of the human family, there can be no reasonable doubt. Such is the testimony of all medical writers. Dr. Hollick has made some very truthful remarks on this subject. He says: "It is well known that there are many severe diseases to which females are subject that can never be removed while they conceive, but which, if uncured, are sure to become fatal, and probably also descend to their children. Some females, also, have deformed pelvises, and can never bring forth live children, while others are *certain to die* if the child remains in the womb till it is a certain size. Besides these cases, how many there are that remain in constant ill-health and suffering from constant child-bearing, without the possibility of relief or escape.

"It is not generally known that it is the regular custom in medical practice, when a female has a deformed pelvis, or is otherwise incapable of being delivered at the full term, to *produce abortion.* This, however, is the invariable custom! and it is done because it is thought better to sacrifice the *fœtus* only than to let both die, as they assuredly would if the gestation were allowed to proceed. Now, it may well be a question in such a case, whether it would not be better to teach how to prevent conception altogether. I am confident that much of the horrible practice of procuring abortion, now so prevalent among married people, is caused by the want of simple and reliable means of prevention.

"There are few persons, except medical men, who have any idea of the extent to which the revolting practice of abortion is now carried, nor of the awful consequences that frequently follow from it. Every female who undergoes any of the disgusting operations practiced for this purpose, does so *at the risk of her life*, and to the almost certain destruction of her health if she survives. Those that take drugs are also equally exposed to risk. Every female may be told with truth---and, indeed, every one ought to know----that *there are no safe means of abortion.* It is true that some few may undergo the ordeal in safety, but none can depend upon doing so, and the chances are ten to one that death, or the evils referred to, will follow. A general knowledge of this fact would do much to prevent the practice, but it would not do away with it altogether, unless some *reliable* means of *prevention* were known, and in many cases it must become a choice between abortion and prevention.

It is possible for persons to avoid having a family without using preventive means. But the deprivation required *will not* be undergone by the great mass. Conception may be avoided by all who will abstain from sexual intercourse for about sixteen days after the monthly flow has ceased. This arises from the fact that the membrane covering the orifices of the fallopian tubes, and

lining the uterus, is ruptured, or torn off, and it takes from ten to sixteen days for it to become renewed.

Whatever may be the views of the rigid moralists in regard to the employment of means for the prevention of conception, the *necessity* of such measures can be clearly shown and justified by every principle of humanity and virtue. Excessive child-bearing may be truthfully said to be the bane of general society. It is not only destructive of the vital powers of the female herself, but entails innumerable ills upon subsequent posterity, in bringing children into the world, like Shakespeare's Richard, "scarce half made up," and liable accordingly to every species of infirmity, inducing further physical and mental degeneracy upon generations destined to spring from enfeebled loins, and lack of that peculiar zest of sexual commerce only incident to the electrical or nervous force concommitant of a sound physical and mental organization of the human being.

The excessive mortality among infants and children, between one and five years of age, is chiefly traceable to inherent debility, and a lack of that *vis medicatrix naturoe* so necessary to the healthful and vigorous unfoldment of the human organism. This excessive waste of human life is surely unnecessary, and can be readily prevented.

There should be a fixed period to allow for natural gestation, lactation, etc. The period from the time of conception to the weaning of the child from the use of its mother's milk, should cover at least two years. Such a rule would prevent that terrible drain upon the vital juices of the woman, incident to excessive child-bearing, which so often destroys the flower of her days, robs her of her beauty and strength, and drags her down to an untimely grave, not only herself but her innocent and helpless offspring.

With these startling facts and arguments staring me in the face, I shall not hesitate to reveal such information as I am in possession of, for the prevention of conception. There are *reliable* and *harmless* means which *never fail* in effecting the object, and it is but right and proper that they should be placed in the hands of the married. Those who accord with me in these views, and desire to avail themselves of the means science and art have thus far afforded, are refered to the following.

Firstly, I will speak of the "*Membraneous Envelope.*" This is an improvement on the ordinary French Male Safe or Condum, and, like it, entirely envelops the penis. Unlike the "Safe," however, it is a good conductor of magnetism or electricity, and permits the free and unobstructed influx and efflux of individual electricity in the act of coition---also the combined action of the alkalies and acids. The Condum or Safe is manufactured from the intestines of sheep, hogs, etc., and is more or less permeated with oleaginous or fatty matter, which is a non-conductor of electricity, and consequently a non-conductor of the magnetism of the sexes. Then, too, it is quite too thick to render its use agreeable. The Membraneous Envelope is prepared from the bladder of a fish caught in the Rhine. It is flexible and silky in texture, and

a perfect conductor of electricity and magnetism, being entirely free from fatty matter. In consequence of these peculiarities, and its extreme thinness, its use does not in the least interfere with the pleasure of the act, while its susceptibility to electrical influences renders its use entirely *harmless*. It is also more reliable, because *stronger*. This fact would seem almost incredible, when I say that it takes nearly two dozen of the "*Membraneous Envelopes*" to weigh half an ounce, the average weight of each being only about ten grains! But, notwithstanding their fineness of texture, it would require as much force to break one of them as would be necessary to abrade the mucuous membrane of the glans-penis. There is not the least danger of their breaking, and in this respect they are vastly superior to the article they so much resemble. In cases of ulceration of the womb, leucorrhœa, or any other venereal disease, the use of the Membraneous Envelope is of the greatest utility, because, while it is a sure preventive of conception, it also prevents either party from contracting disease. It is of course impossible for the male to contract a disease from the female, or a female to contract a disease from a male when it is used, and this is a decided recommendation for it, when it is remembered how commonly even married ladies are diseased in those organs, and how often, too, virtuous ladies are physically contaminated by vicious husbands. Many married men are proverbially promiscuous, and do not attempt to hide their habits from their wives, and such persons, particularly, ought, for humanity's sake, to employ the Membraneous Envelope when having sexual connection with their wives---and the latter could not be blamed for rigidly insisting upon it. The Membraneous Envelope can be sent by mail with ordinary letter postage, and will be supplied at five dollars per dozen, or three dollars per half-dozen. A sample will be sent for one dollar if wished.

Secondly. "*The Apex Envelope.*" This is certainly an ingenious contrivance, just large enough to cover the glans-penis without enveloping the whole organ. It is composed of rubber of a delicate texture, not thicker than the cuticle itself, and so shaped and bounded at the open end with an India-rubber ring, that, when adjusted to the glans, it adheres so closely as to appear almost like a part of the organ itself.

It is entirely a new thing as well as the "Membraneous Envelope," and is preferred by many. It, however, has this objection; rubber is a non-conductor of electricity, and also impervious to the action of either the alkali or acid. Inasmuch as the Apex Envelope does not cover the whole penis, however, it does not prevent the interchange of the individual electricity, but it does prevent the generation of chemical electricity in the copulative act. Herein it is defective. There can be no question as to its safety, if properly adjusted.

This article can be enclosed in a letter with ordinary postage, and will be supplied at three dollars per dozen, or two dollars per half-dozen. Sample, fifty cents. The foregoing are used by the male. The following means may be resorted to by the female:

Thirdly, and lastly. *The Womb Veil.* This consists of a contrivance which the female easily adjusts in the vagina *before* copulation, and which spreads a thin tissue before the mouth of the womb, so as to prevent the seminal aura from entering. It is an ingenious invention, and one which has already proved a great blessing to thousands of females. This prevention possesses the following qualities: Conception cannot possibly take place when it is used. The full enjoyment of the conjugal embrace can be indulged in during coition. The husband would hardly be likely to know that it was being used, unless told so by the wife. Its application is easy, and accomplished in a moment, without the aid of a light. It places conception entirely under the control of the wife, to whom it naturally belongs; for it is for her to say at what time, and under what circumstances she will become the mother, and the moral, religious, and physical instructress of offspring. It is durable, and will last a great many years. Science, it seems to me, can hardly give a more complete contrivance than this for the prevention of conception. For this specific purpose nothing yet discovered can equal it for simplicity and utility. When seen, it speaks for itself, to any one conversant with the anatomy of the female organs. Physicians who examine it, at once pronounce it "just the thing." Nor can I see that any harm can arise from its use. It permits the free and unobstructed interchange of individual electricity and the union of alkalies and acids, and, in fact, obstructs no function in copulation, except the reproductive. Since its invention I have introduced it quite extensively, and to all it appears to give the highest satisfaction. The Womb Veil, with its necessary appendages, can be obtained by mail. Price three dollars. Sent closely sealed to any part of the United States, postage paid, on receipt of the price.

I have now introduced the only reliable means yet discovered for the prevention of conception. There are various other contrivances and theories put forth, but, after a careful examination of them, I feel constrained to say that I cannot conscientiously introduce them or recommend them here. They are either unreliable, injurious, or absolutely dangerous. I have endeavored in this essay to avoid everything charlatanish, and to recommend only such means as I feel convinced are worthy the attention of married people All orders must be accompanied with the cash to receive attention.

I would say to the reader, by way of caution, that I have not, nor shall I, have agents for the introduction of the foregoing articles. It would be an easy thing for unprincipled persons to impose imperfect and unreliable imitations on those who are not familiar with such things, and consequently those who want them will do better to send their orders directly to me. Communications, with regard to these matters, will be treated with the strictest confidence. All communications must be addressed to

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